Baker McKenzie.

Contaminated Land 2024

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2024

Introduction

To our valued clients, colleagues and friends:

The Global Environmental Group is pleased to share with you our 2024 Edition of Baker McKenzie's International Guide to Contaminated Land. This Guide offers a unique overview of national laws and regulations in over thirty countries governing the discovery, management and cleanup of environmental impacts at industrial sites. Specifically, the Guide addresses the key legal issues and risks that must be understood and assessed to ensure the effectiveness of any response to environmental contamination, including the respective national legislative frameworks, the regulatory requirements for the reporting and clean-up of contaminated lands, applicable clean-up standards, potential agency enforcement risk and liability for third party claims, and the ability of parties to transfer liability for contamination by contract. The 2024 Edition of our Guide also addresses the status of new regulations and related cleanup standards governing the identification and cleanup of "forever chemicals" - per- and polyfluoroalkyl substances ("PFAS") – which have emerged as a particularly difficult remediation challenge at contaminated sites around the world.

As you will see, we have once again chosen to organize the latest edition of our Guide in a question and answer format for ease of reference and to ensure the comprehensiveness and consistency of our review and guidance. We hope you will find the organization and substance of the Guide to be a useful resource. Of course, this Guide is intended to be a resource only and should not be viewed as legal advice. This is especially true as this area of law is extremely complicated and rapidly changing and the legal summaries here may not reflect the state of the law as applied to any particular circumstance.

Please contact us should you have any questions or desire any legal advice relating to contaminated lands issues as you may confront them in connection with your international operations.

Kind regards,

Elisabet Cots
Baker McKenzie (Barcelona),
Lead Editor

Along with The Baker McKenzie Global Environmental Group

Summary

Asia Pacific

Australia

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by Baker & McKenzie, Sydney and Brisbane

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

There is no Commonwealth law that deals directly with contaminated sites, although there are a number of policy documents and guidelines that have influenced state laws.

Each state and territory in Australia regulates contaminated land. New South Wales (NSW) and Western Australia are the only states that have legislation specifically relating to contaminated land, while the rest of Australia's states and territories regulate the issue with more general environmental protection and management Acts and subordinate legislation. The following table sets out the relevant Australian legislation.

Jurisdiction	Legislation
NSW	Contaminated Land Management Act 1997
Victoria	Environment Protection Act 2017
Queensland	Environmental Protection Act 1994
Western Australia	Contaminated Sites Act 2003
South Australia	Environment Protection Act 1993
Tasmania	Environmental Management and Pollution Control Act 1994
Australian Capital Territory	Environment Protection Act 1997
Northern Territory	Waste Management And Pollution Control Act 1998

The state regimes all differ, but where a general principle can be extracted, this is noted in the answers below. Where state-specific examples are given to the questions below, the examples are drawn from states where foreign corporations are more likely to operate, namely: New South Wales, Victoria, Western Australia and Queensland.

2. Is there a definition of contaminated land?

The definition varies slightly in each jurisdiction. Generally, each jurisdiction in Australia uses a definition of contamination similar to "a condition of land or water where any chemical substance or waste has been added as a direct or indirect result of human activity at above background level and represents, or potentially represents, an adverse health or environmental impact." (See National Environment Protection [Assessment of Site Contamination] Measure 1999, s 3.)

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes, all states have laws with respect to cleanup and remediation of contaminated land. These laws are listed in the table set out above.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

For some of the Australian jurisdictions, the answers to questions 4.1 and 4.2 are set out in the table that follows.

Jurisdiction	Responsible persons

NSW	A person is responsible for contamination of land if that person:
	• caused the contamination of the land;
	• performed an act or activity that resulted in the conversion of a substance that did not cause contamination of the land into a substance that did cause contamination of the land;
	• is the owner or occupier of the land and knew or ought reasonably to have known that contamination of the land would occur and then failed to take reasonable steps to prevent the contamination; or
	• carried on activities on the land that generate or consume:
	  ○ the same substances as those that caused the contamination; or
	  ○ substances that may be converted, by reacting with each other or by the action of natural processes on the land, into substances that are the same as those that caused the contamination;
	unless it is established that the contamination was not caused by the person.
	If the polluter cannot be found, the Environment Protection Authority (EPA) can pass on liability to other persons in the following order:
	• an owner of the land;
	• a notional owner of the land.

Victoria	EPA Victoria may issue a cleanup notice to the following persons: • The occupier of any premises upon or from which pollution has occurred or has been permitted to occur

Jurisdiction	Responsible persons
	• The person who has caused or permitted the pollution to occur • Any person who appears to have abandoned or dumped any industrial waste or potentially hazardous substance on the land • Any person who is handling industrial waste or a potentially hazardous substance in a manner that is likely to cause an environmental hazard If the polluter cannot be found, the authority may hold responsible another person in the above hierarchy. In some circumstances, a corporation that did not directly cause or permit the pollution to occur may also be issued with a cleanup notice if the relevant conduct was by one of their subsidiaries or a related entity. In addition to the above, a person engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks as far as reasonably practicable. A person in management and control of land has the primary duty to minimise risks of harm to human health and the environment from contaminated land.

Queensland	The administering authority may issue a written clean-up notice to the following persons:
	• A person causing or permitting or, who caused or permitted, a contamination incident to happen
	• A person who, at the time of the incident, is or was:
	  ○ the occupier of the contamination site; or
	  ○ the owner, or person in control, of a contaminant involved in the contamination incident
	• If a cleanup notice is issued to a corporation (the first corporation) in relation to the incident and it fails to comply with the notice:
	  ○ a parent corporation of the first corporation; and
	  ○ an executive officer of the first corporation
	
	If the polluter cannot be found, the authority may hold responsible another person in the above hierarchy.

Western Australia	The hierarchy of responsibility for remediation of the site is as follows: • The person who caused or contributed to the contamination of the site

Jurisdiction	Responsible persons
	• The owner or occupier of the site who has changed, or proposes to change, the use to which land that comprises all, or part, of the site is put • The person who is the owner of the site, or of a source site If the polluter cannot be found, the authority may hold responsible another person in the above hierarchy.

There may also be some circumstances in which there is executive liability for directors or persons involved in the management of a company that has liability for contamination, subject to the availability of defences. The details of provisions of this kind differ between the jurisdictions and the risk of executive liability depends on all circumstances relating to any alleged contravention.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

There is no statutory provision in any of the jurisdictions that apportions liability between the appropriate persons. Rather, each jurisdiction's environmental authority is given discretion to apportion responsibility based on the facts, as is appropriate.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Liability for a cleanup can extend to historical contamination. By way of example, in NSW, in determining the appropriate person to serve with a management order, the EPA is, "as far as practicable," to specify a person who is responsible for the contamination over the owner of the land or the notional owner of the land (such as a mortgagee in possession).

A similar principle applies in Western Australia, where the legislation establishes a hierarchy for determining responsibility for remediation, and allows for the transfer of that responsibility. In addition, in Western Australia, if an owner or occupier has changed or proposes to change how it will use all or part of the land, then the owner or occupier will be liable for remediation of the land to the extent that the remediation is required because of the change, or proposed change, of use. To the extent that remediation is required because of the change of use, the people who caused or contributed to the contamination, as well as the state, are released from any liability they may otherwise have had.

In Victoria, there may be a greater risk to owners and occupiers of land. The Victorian Environment Protection Authority may serve a notice directing the recipient to clean up the contaminated area and the person so directed need not necessarily be the person who caused the contamination. There is no statutorily entrenched hierarchy of responsibility and the notice may be served on the occupier. The definition of occupier includes a controller of premises, which may be an owner or a lessee, and in certain circumstances, can include a financial institution that is a mortgagee in possession.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The relevant authority directs the cleanup process in accordance with regulations in each state and having regard to all the circumstances including the risk presented by a contaminant. In general, the threshold test is whether contamination presents a significant risk of harm to human health and/or the environment.

In NSW, the EPA is able to require remediation of a site (among other powers) if it has reason to believe the site is contaminated and that the contamination is significant enough to warrant regulation. It must take into account various factors before making its decision, including whether the contaminating substances have or are likely to cause harm, the use of the site and surrounding sites, and whether the substances have migrated or are likely to migrate from the site.

In Victoria, the EPA may specify the method to be used for cleanup of contaminated land. Cleanup notices and environmental audits typically include risk assessment for the purposes of identifying and addressing contamination with a risk-based approach.

6. What level of cleanup is required?

A cleanup is required to a suitable-for-use level, and therefore, there is a different level for industrial land to that required for land used for residential purposes. In most states, the public authority has issued guidelines to assist with determining levels of cleanup

7. Are there different provisions relating to the cleanup of water?

In general terms, the same principles as discussed above pertain to the cleanup of land and water.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

The process of developing a specific framework to address PFAS is ongoing across the Australian jurisdictions. Presently, PFAS risks are addressed under the existing pollution and contamination regimes as well as corresponding chemical regimes and typically with input from health regulators in the event of area specific risks.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Most state environmental laws contain provisions enabling criminal prosecution to be brought by the administering authority for any contravention of legislation that results in serious environmental harm.

For instance, in Victoria, contamination of land is an indictable offense, with maximum penalties and penalties for continuing offenses prescribed by legislation and subject to any agreements or determination by a court. Causing contamination may also breach the general environmental duty obligation to minimise risks to human health or the environment.

It is not in itself a criminal offense to own contaminated land, but a criminal offense may arise from the effects of contamination.

Owners generally have the obligation to inform the relevant state authority if they are aware of any site contamination. In NSW, this obligation to inform concerned authorities is extended to circumstances where the owner ought reasonably to have been aware of the contamination. There are significant penalties, amounting up to AUD2 million, for failing to report contamination.

In Western Australia, land owners or occupiers of contaminated sites, people who caused or contributed to the contamination of a site, and auditors engaged to provide a report with respect to a site, must report known or suspected contaminated sites. If these people fail to report sites that they know or suspect to be contaminated, they may be fined and a daily penalty also applies for a continuing offense. Higher penalties generally apply to corporations than to individuals.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Generally, failure to comply with a cleanup order is a criminal offense.

In NSW, it is an offense to fail to comply with an order to remediate land that has been declared a "significantly contaminated land." The maximum penalty for failing to comply with such an order is presently AUD1 million for a corporation or AUD250,000 for an individual.

In Western Australia, if a company fails to comply with what a notice requires, it can be prosecuted for a criminal offense carrying a maximum penalty of up to AUD500,000, with daily penalties of up to AUD100,000.

In all states, in certain circumstances, directors and managers of corporations can be held personally liable for offenses committed by the corporation. This may include an offense of failing to comply with a cleanup order.

11. Can the legal entity be held liable?

Across Australia, both natural persons and corporate entities – and in some circumstances, other related bodies in a corporate group - may be held liable for various offences relating to contamination and remediation. This includes criminal liability and penalties, however, where offences include the potential for any period of imprisonment, this only applies to natural persons.

For example, in Queensland, a "related person" to the entity required to take action to comply with contamination obligations could also be the subject of enforcement requirements in the event that the entity with those obligations does not comply.

12. What authority enforces cleanup?

The particular state government's regulatory authority issues and enforces cleanup notices. Local councils may also deal with less serious contamination (such as contamination that has been determined not to present a significant risk of harm), generally when landowners need approval to undertake a new development project.

In some jurisdictions, if a person fails to comply with a cleanup order, the regulatory authority (such as the EPA) or another public authority can step in, carry out the works required themselves, and recover the costs from the person responsible.

13. Are there any defenses?

There may be a range of defences available in relation to alleged contraventions of statutory obligations, depending on the relevant facts. These may relate to whether or not there ought to be any liability and the extent of that liability, as well as mitigating the seriousness of any penalty that would apply where liability is established. By way of example in NSW, there may be a defense to some of the most serious pollution offenses if the person establishes:

- that the commission of the offense was due to causes over which the person had no control; and
- that the person took reasonable steps to prevent the contamination.

In Queensland, there are defenses for failing to comply with cleanup notices, including where the contamination was caused by a natural disaster, by a terrorist act or deliberate sabotage.

It is a defense to an offense of releasing a prescribed contaminant in Victoria, if the release occurred under an authorized person's emergency direction.

In relation to the liability of directors and managers of corporations, in most states, in order to successfully defend a prosecution, the director or manager would need to prove either that they were not in a position to influence the conduct of the corporation or that they used all due diligence to prevent the commission of the offense by the corporation.

14. Can a third party/private party enforce cleanup?

Generally, the regulatory authority enforces a statutory cleanup notice. However, in some states, for example, NSW, members of the public can bring proceedings to challenge or to enforce a decision made by the EPA under the legislation, such as a decision relating to a cleanup notice. There may also be opportunities for other entities to carry out clean up action and thereafter seek to recover the costs from the person responsible.

15. Can third parties claim damages?

Common law claims of negligence, nuisance and trespass have historically been made for breaches of general environmental duties, and have been used to claim damages. For example, if contamination was to migrate off a site onto adjoining land and:

- the contamination caused damage to the adjoining landowner's property or business (by a diminution in the value of the land or actual harm to persons or property); and
- the owner was shown to owe the adjoining landowner a duty of care; and
- the owner was shown to have breached that duty, for example, by failing to appropriately monitor the contamination or take steps to prevent its migration off the land,

then the adjoining landowner may be able to bring an action against the owner for damages and hold the owner liable for remediating the adjoining land.

These types of actions could potentially be maintained against a prior owner in relation to land it has previously disposed of, although a claimant may have more difficulty proving negligence in those circumstances.

These cases are typically based on the facts at hand in those circumstances, and they are complicated actions that are very expensive to defend. With the development of specialized contaminated land laws around Australia, common-law actions are being used less often in the resolution of contaminated land issues

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

In some jurisdictions, there are requirements to provide written notice of the listing of a property on an environmental management register (which goes to contamination issues) prior to entering into a contract for sale. A failure to do so provides opportunities for the incoming purchaser to terminate the contract of sale prior to completion of the transaction.

Given the duty to notify contamination to the EPAs across the Australian jurisdictions, a buyer acting reasonably and undertaking due diligence prudently can also obtain information to consider whether any known contamination risks exist at a site.

Disclosure of any actual or likely contamination issues or remediation liability by a vendor can also assist in minimising the risk of any other action such as pursuant to a warranty being undertaken by a purchaser following sale.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

It is not a legal requirement to register a declaration of contaminated land on the Land Registry. Any notification of contamination to the EPA or formal record of contamination on particular land is available by online searches of the registers maintained by the relevant authorities.

This is typically on a lot by lot basis, but in NSW for example there is a list of sites (with street addresses) that have been notified to the EPA as being contaminated which is publicly available and updated periodically throughout the year.

This means that while the Land Registry may not reflect any known contamination, any formal record of known contamination ought to be identified in each jurisdiction's contaminated land register by a purchaser undertaking due diligence.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

It is not a legal requirement, but as indicated above it is prudent practice.

By way of example, in Western Australia, any transaction that will involve the sale, lease or mortgage of a site that has been classified as contaminated or possibly contaminated under the relevant legislation must include formal disclosure of the contamination at least 14 days before completion.

In Queensland, it has been decided that a vendor is required to give written notice to any buyer or lessee of land that has been recorded on the Contaminated Land Register.

In South Australia, there is a statutory mechanism under which liability for site contamination may be transferred from a vendor to an incoming purchaser of contaminated land in accordance with an agreement. Subject to the terms of the agreement, this may have the effect of making the legislative obligations relating to contaminated land apply to the incoming purchaser as if it had caused the contamination.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Ordinarily, liability is determined under the statute in each state and it is generally based on the "polluter pays" principle, so the owner or occupier of land who causes contamination is liable for the cleanup. There are exceptions to this principle. For example, if the polluter cannot be located or legal requirements have changed since the pollution occurred, a subsequent owner or occupier may be issued a cleanup order.

19.2. Contractually?

It is possible to provide contractually that the buyer accepts and undertakes cleanup requirements in some states. In Western Australia, responsibility for cleanup can be transferred with a written agreement and with the approval of the Department of Environment and Conservation.

Similarly, in South Australia and Tasmania, responsibility can be transferred to a purchaser if appropriate notices have been provided to the respective environment protection authorities.

Conversely, in NSW for example, a contract cannot operate to transfer liability for contamination under the *Contaminated Land Management Act 1997*.

In our experience, a purchaser will only take on contractual responsibility for contamination for which it is not responsible if it has confirmed the level of contamination (if any) and has been compensated

appropriately for taking on that liability (whether by direct payment or by adjustment of the purchase price).

It is usual for landlords to take responsibility for existing contamination (as between the parties – a contract is not enforceable against persons who are not party to it) and for tenants to take responsibility for contamination they cause or to which they contribute (but only to the extent that they contribute). It is also common practice that each party agrees to indemnify the other for contamination for which they have agreed to be contractually responsible.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Several states in Australia, including NSW, Western Australia, Victoria, Queensland and Tasmania, have a contamination register where the public can search for sites with known contamination. In general, these registers are not exhaustive. If a site is not listed in a register, this cannot be relied upon as conclusive evidence that the site is not contaminated, and conversely (as noted above), nor will listing a site in the register automatically satisfy disclosure obligations.

Indonesia

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by Baker & McKenzie, HHP Law Firm

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes. The regulations are as follows:

(a) Law No. 32 of 2009 on Protection and Management of the Environment, as amended by Law No. 6 of 2021 on the Promulgation of Government Regulation in Lieu of Law No. 2 of 2022 on Job Creation as a Law ("**Environmental Law**")

(b) Government Regulation No. 22 of 2021 on the Implementation of the Protection and Management of the Environment ("**GR 22/2021**")

(c) Minister of Environment and Forestry ("**MOEF**") Regulation No. P.101/MENLHK/SETJEN/KUM.1 /11/2018 of 2018 on Guidelines for the Restoration of Lands that are Contaminated by Hazardous and Toxic (*Bahan Berbahaya dan Beracun - "***B3***"*) Waste ("**MOEF Reg 101/2018**")

2. Is there a definition of contaminated land?

The prevailing regulations are silent on the definition of contaminated land. However, the prevailing regulations do provide the following definitions:

(a) GR 22/2021 defines "environmental contamination" as the entry or inclusion of living things, substances, energy and/or other components into the environment by human activities so that they exceed the determined environmental quality standard.

(b) MOEF Reg 101/2018 defines "lands that are contaminated by B3 waste" as lands that are exposed to B3 waste and/or lands that contain substances that are categorized as B3 waste based on characteristic tests of samples of such land.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

In general, any person polluting and/or damaging the environment must carry out the cleanup.[1]

In the case of B3 waste, the polluter will be responsible for the cleanup, including every person producing, collecting, transporting, utilizing, processing, stockpiling and/or dumping B3 waste.[2]

[1] Art. 54 of the Environmental Law
[2] Art. 2 of MOEF Reg 101/2018.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The regulation is silent on whether the liability can be passed to persons other than the polluter. Arguably, it is possible to file a claim against the owner or the occupier. However, the court decision on that claim would depend on whether there is evidence showing that the respondent is responsible for the pollution or is aware of, but wilfully does not carry out any restoration for, the pollution.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

The regulation is silent on the proportion of liability. If the case is being determined by a court, the proportion of liability is likely to be determined in the court decision.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The Environmental Law and its implementing regulations do not govern to what extent the historical contamination should be cleaned up.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

In general, any person polluting and/or damaging the environment must carry out the cleanup.[3] The determination of environmental pollution is measured through the environment quality standards (*baku mutu lingkungan hidup*).[4] The threshold for each quality standard is further set out under separate ministerial regulations.

In relation to B3 waste, cleanup is mandatory for any person producing, collecting, transporting, utilizing, processing, stockpiling and/or dumping B3 waste.[5]

6. What level of cleanup is required?

The Environmental Law and its implementing regulations do not classify certain levels of cleanup. However, the Environmental Law and GR 22/2021 provide several stages of cleanup, i.e., (i) stopping the source of contamination and cleaning the contaminating substance, (ii) remedy, (iii) rehabilitation, (iv) restoration and/or (v) other method in accordance with the development of science and technology.[6]

7. Are there different provisions relating to the cleanup of water?

Yes. GR 22/2021 provides that any person in charge of a business that contaminates water is required to carry out the cleanup of water. This consists of (i) cleaning of the water contaminating

[3] Art. 54 of the Environmental Law
[4] Art. 20 paragraph (2) of the Environmental Law provides that the environmental quality standards include the following:
(a) water quality standards
(b) waste quality standards
(c) sea water quality standards
(d) ambient air quality standards
(e) emissions quality standards
(f) disturbance quality standards
(g) other quality standards in accordance with the development of science and technology
[5] Art. 410 of GR 22/2021
[6] Art. 54 of the Environmental Law and Art. 415 of GR 22/2021

substances, (ii) remediation, (iii) rehabilitation, (iv) restoration and (v) other method in accordance with the development of science and technology.[7]

If the person in charge of the business does not clean up the water within 30 days after they become aware of such contamination, the MOEF, governor or regent/mayor may appoint a third party to clean up the contaminated water. The cost then will be covered by the environment restoration guarantee fund.[8]

In general, every environmental approval holder is required to provide a guarantee fund.[9] Any central government or local government institutions that hold an environmental approval are required to comply with Law No. 17 of 2003 on State Funds (as amended). On the other hand, business actors that hold an environmental approval are required to deposit the guarantee fund to a government bank that is appointed by the government.[10]

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Currently, there is no specific mandatory remediation of PFAS (*per- and polyfluoroalkyl*) under the applicable laws and regulations in Indonesia.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

In general, the "polluter pays" principle applies.[11] However, under the Environmental Law, there are several actions that can be deemed as criminal offenses and, consequently, the polluters can be imposed with fines and/or imprisonment. The offenses listed below, however, are not limited to contaminated land.

No.	Offense	Imprisonment	Fine
1.	(a) Intentionally exceeding the quality standard of air, water, seawater or standard criteria of environment damage[12]	3-10 years	Min. IDR 3 billion Max. IDR 10 billion
	(b) If 1(a) above causes injuries and/or damages human health	4-12 years	Min. 4 billion Max. 12 billion
	(c) If 1(a) above causes serious injuries or deaths	5-15 years	Min. IDR 5 billion Max. IDR 15 billion
2.	(a) Due to negligence, exceeding the quality standard of air, water,	1-3 years	Min. 1 billion Max. 3 billion

[7] Art. 153 of GR 22/2021
[8] Art. 154 of GR 22/2021
[9] Art. 472 paragraph (1) of GR 22/2021
[10] Art. 472 paragraph (3) of GR 22/2021
[11] Art. 87 of the Environmental Law
[12] Art. 98 of the Environmental Law

No.	Offense	Imprisonment	Fine
	seawater or standard criteria of environment damage[13]		
	(b) If 2(a) above causes injuries and/or damages human health	2-6 years	Min. IDR 2 billion Max. IDR 6 billion
	(c) If 2(a) above causes serious injuries or deaths	3-9 years	Min. IDR 3 billion Max. IDR 9 billion
3.	Violating the quality standard of wastewater, emission or disturbance[14]	Max. 3 years	Max. IDR 3 billion
4.	Dumping B3 waste and/or substance to the environment without a permit[15]	Max. 3 years	Max. IDR 3 billion

If the penalties are imposed on companies, such companies can be imposed with any or all of the following additional penalties:[16]

(a) Seizure of profits earned from the crime

(b) Closure of business and/or activity site wholly or partially

(c) Restoration of impacts of the crime

(d) Requirement to work on what is neglected without rights

(e) Guardianship for companies for a maximum period of 3 years

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

No. If the polluter fails to perform cleanup as required under the regulations, the polluter may be imposed with administrative sanctions ranging from written warnings to revocation of business license. Further, there is a possibility that the government may appoint a third party to restore the environment polluted or damaged by B3 waste and the costs can be recovered from the deposited guarantee fund (please refer to our note regarding guarantee fund in No. 7).

Specifically for land contaminated with B3 waste, any person that wants to stop utilizing, producing, processing, stockpiling and/or dumping B3 is required to clean up the environment if the MOEF finds out that there is B3 waste contamination.[17] There is no penalty, but otherwise, the MOEF will not issue any determination of cessation of activities related to B3 waste.

11. Can the legal entity be held liable?

Yes, the legal entity can be held liable. The obligation to carry out a cleanup applies to any party producing, collecting, transporting, utilizing, processing, storing and/or dumping the hazardous waste

[13] Art. 99 of the Environmental Law
[14] Art. 100 of the Environmental Law
[15] Art. 104 of the Environmental Law
[16] Art. 119 of the Environmental Law
[17] Art. 325, 354, 365, 378, 388 and 401 of GR 22/2021

(the "**polluter**"). The regulation defines 'any party' as individuals or companies (both legal entities and non-legal entities).[18]

If the polluter fails to perform cleanup as required under the regulations, the polluter may be imposed with administrative sanctions ranging from written warnings to revocation of business license.[19] The polluter may also be subject to criminal sanctions as elaborated in table No. 9 above.

If the criminal offense is done on behalf of the company, the criminal sanctions may be imposed on (i) the company (i.e., represented by the director of the company) and/or (ii) a person that gives an order to conduct the criminal action or leads the criminal action.[20]

12. What authority enforces cleanup?

MOEF or regional government have the authority to enforce cleanup depending on their authority/jurisdiction.

13. Are there any defenses?

The enforcement of environmental contamination and/or environmental damage adopts a strict liability concept where the burden of proof lies within the polluter. The polluter may be exempted from environmental liabilities if the polluter can prove that environmental contamination and/or environmental damage is due to:[21]

(a) Natural disaster or war

(b) Force majeure

(c) Other party's action

14. Can a third party/private party enforce cleanup?

The polluter may cooperate with third party holding an environmental business license to manage its hazardous waste but not the contaminated land.[22] However, the regulation provides that the government (i.e., MOEF, governor, or regent/mayor (depending on their jurisdiction)) may appoint a third party to carry out cleanup in case the polluter fails to recover the contaminated land within two days after the environmental contamination and/or environmental damage is discovered, or 30 days after the recovery action is performed.[23]

15. Can third parties claim damages?

Yes, third parties that are affected by the environmental contamination and/or damage may claim damages. The Environmental Law provides that every business actor causing environmental contamination and/or damage must pay damages to the affected party. In case of dispute, the polluter and the affected party must first reach an amicable settlement to discuss the form and the amount of damages, including certain actions to remedy the environmental contamination and/or damage, before deciding to file a lawsuit to the court.[24]

[18] Art. 410, 411 of GR 22/2021
[19] Art. 508 of GR 22/2021
[20] Art. 116 of the Environmental Law
[21] Art. 501 of GR 22/2021
[22] Art. 59(3) of the Environmental Law
[23] Art. 413, 424 of GR 22/2021
[24] Art. 84, 85, 87 of the Environmental Law

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

In a sale and purchase of land transaction, there is no specific requirement under the laws and regulations to disclose and include information about contaminating activities that have been carried out on the property.

However, the buyer may check whether the seller conducts any contaminating activities and if so, whether the seller has the relevant environmental license. In addition, it is also common to ask for a warranty from the seller regarding contaminating activities that have been carried out on the property.

Note that in general, every business and/or activity that has a material impact on the environment would require an Environmental Impact Analysis (*Analisis Mengenai Dampak Lingkungan Hidup* – "**AMDAL**") in order to obtain the Environmental Approval.[25]

In practice, the buyer may conduct a land due diligence over the land to, (i) identify the business activity of the seller and whether such business activity is classified as a business that is required to have an AMDAL, (ii) check whether the seller has the appropriate land title certificates, business license and/or environmental approval over such land, as well as (iii) check whether there are any ongoing disputes or issues in relation to the plot of land or if there have been any disputes or issues in relation to the plot of land in the past.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

This is not mandatory. However, as mentioned on No. 16 above, the buyer may consider conducting a land due diligence to identify whether the business activity is classified as an activity that is harmful to the environment and may require the seller to provide its environmental license.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

No. The Environmental Law provides that the seller as the polluter is still the one who is legally liable for the contamination and to perform the cleanup.[26]

19.2. Contractually?

Assignment of cleanup obligations to the purchaser contractually can be done. However, the Environmental Law provides that the liabilities of the polluter will not cease to apply.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

In general, even if the buyer purchases and carries out the recovery activities in certain areas, from the perspective of the Environmental Law, the seller as the polluter is still the one who is legally liable for the contamination and to perform the remediation. The purchase of land and subsequent recovery

[25] Art. 5 of GR 22/2021
[26] Art. 87(2) of the Environmental Law

work performed by the buyer does not absolve the seller of its liabilities. This is in line with the principle of the "polluter pays" adopted in the Environmental Law.

Further, although this is not mandatory and not specifically related to contaminated land, the purchaser may carry out a 'land search' over the plot of land at the relevant land office where the land is located. This is an official document issued by the relevant land office, namely Statement Letter of Land Registration (*Surat Keterangan Pendaftaran Tanah*), which includes information on the current landowner details, relevant land certificates, whether the land is being encumbered with security, any past or ongoing land disputes, including those that may arise from contaminating activities done by the seller.

Japan

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes, the Soil Contamination Countermeasures Act (referred to as the "Act") mainly regulates soil contamination in Japan. Also for other types of contamination not excluded from the Act are stipulated in acts such as Act on Special Measures against Dioxins.

There are also ordinances stipulated in relation to soil contamination set by each prefectures and cities. The ordinances differ according to local governments, and both the Act and the ordinances will be applied to cases of soil contamination.

In addition to the Act, there are separate regulations for special pollution, such as dioxine.

The Act on Special Measures against Dioxins stipulates the responsibilities of businesses regarded as "Special Facilities" and measures needed to be taken in "Controlled Zones" (an area within the prefecture that satisfies the requirement specified by Cabinet Order where the conditions of the soil contamination caused by Dioxins fails to comply with the standards set forth in Article 7 which pertain to contaminated soil and where removal, and other measures concerning the contaminated soil within the zone, caused by Dioxins, is necessary).

There are also guidelines on counter measures on soil contamination by oil (a state where the land on which the soil containing mineral oils is located (including water from wells, ponds, waterways, etc. on the land) causes a hindrance to the protection of the living environment due to oil odour or oil film to persons using or intending to use the land or land in the vicinity of the land.) stating recommended assessment methods and decontamination measures, issued by the Ministry of Environment in 2006.

2. Is there a definition of contaminated land?

The Act states it regulates "soil contamination by Designated Hazardous Substances". The "Designated Hazardous Substances" are 26 substances then defined in Article 2 of the Act as substance including but not limited to lead, arsenic, trichloroethylene, and similar substances (excluding radioactive substances), designated by a Cabinet Order as likely to have harmful effects on human health when present in soil.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes, Article 7 of the Act states that the prefectural governor shall instruct the Owner etc. (defined below) of the land to take an action for remediation of the contaminated soil, including containment of the underground water by e.g., excavating or purifying the contaminated land in the case where the land is designated as " Area which Requires Remediation Action" under the Article 6 of the Act because (i) soil contamination caused by the Designated Hazardous Substances is found not to meet the standard stipulated under the Enforcement Order of the Act and (ii) there is a damage to human health or a risk of damage to human health because of such contamination as a result of the soil contamination investigation.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The owner, manager, or the occupier of the land (herein after referred to as "Owner etc.") is primarily responsible for the clean up. However, the Owner would be able to claim a reimbursement of remediation cost to the polluter when it is clear that Owner, etc said site has caused the contamination (Article 8 of the Act).

The manager or the occupier will only be responsible for the clean up when the person who has the necessary title to excavate or make changes to the land, is not the owner but the manager or occupier, in view of the contractual relationship regarding the management, use, profit of the land and the actual condition of the management (2019 Notice concerning the enforcement of the Soil Contamination Countermeasures Act after Amendment by the law for partial amendment to the Soil Contamination Countermeasures Act).

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

N/A

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

Both the owner and the occupier shall be responsiblein accordance with a degree of contribution to the contamination, such as the time period the owner or the occupier has used the Designated Hazardous Substance that caused contamination, how the designated Hazardous Substance has been used, etc.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Unless the historical contamination satisfies the above conditions in which the polluter will be responsible for contamination (Article 8 of the Act), the current Owner etc. of the land will pay for the cleanup including historical contamination.

The Owner etc. or polluter can choose between the measure instructed by the local government authority or any other measure deemed as having an equivalent or greater effect as the measure instructed. However, there are certain restrictions in choosing the measure for special types of pollution.

Types and standards of instructed measures and other measures are listed in Article 38 to 42 and Appended Table 6 and 8 of the Enforcement Regulations of the Act.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

A cleanup is required when the land in question is specified as an 'Area which Requires Remediation Action' (Article 6 of the Act) as a result of investigation of soil contamination carried out prior to such specification which find out the state of the land does not meet the criteria stated in Article 6 of the Act, and there is a damage to human health or a risk of damage to human health because of such contamination as a result of the soil contamination investigation (Article 5 of the Ordinance on the Soil Contamination Countermeasures, Article 31 of the Enforcement Regulations of the Act).

6. What level of cleanup is required?

Instructions and orders for the remediation only require minimum of the contamination to be remediated to achieve the purpose of the Act stipulated in Article 1, and when the land in question is designated as "Area which Requires Remediation," the Owner, etc. of the land is required to submit a plan for remediation (Article 7 of the Act) where the Owner, etc choose the remediation measures. The purpose of the Act is to prevent harm to human health resulting from contaminated land, and thereby protect the health of the citizens. The choice of remediation are executed so as to achieve the above purpose, a complete remediation is not required by the Act.

7. Are there different provisions relating to the cleanup of water?

As the primary objective of the Act is to protect the health of the people by preventing ingestion of contaminated soil(including ingestion of soil particles) and drinking etc. of ground water etc. contaminated by hazardous substances leached from contaminated soil, the provisions of the Act relating to the cleanup of water are limited to provisions or measures which contribute to such purpose. The Ordinance of the Act has provisions relating to the monitoring of ground water as one of the measures to improve the state of land. Water Pollution Prevention Act separately stipulates the prevention of pollution of water (including deterioration of the condition of water in ways other than of its quality) in Areas of Public Waters and in groundwater by regulating Effluent discharged by factories and workplaces into Areas of Public Waters and the permeation of Effluent underground, and promoting Domestic Wastewater measures and other related measures.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

PFAS and PFOS has not yet been stipulated as substances subject to the Act and the threshold for mandatory remediation of PFAS has not been stipulated for both soil and groundwater. The Ministry of the Environment and Ministry of Health, Labor and Welfare has just began discussing on the threshold for water as of January 24th, 2023. As for PFAS in soil, technical studies are underway to establish measurement methods as a prerequisite for setting threshold for soil. Please note that this threshold is not for mandatory remediation of PFAS and just to set standards for PFAS.A provisional target value for tap water was set at 50ng/L (total of PFOS and PFOA), in an enforcement notice in "March 30th, 2020 Partial Revision of the Ministerial Ordinance on Water Quality Standards etc.

Also, a provisional threshold had been set at 50 ng/L (the total of PFOS and PFOA) as items requiring monitoring according to the according to the notice from Ministry of the Environment dated May 28, 2020, "Enforcement of Environmental Standards, etc. for Protection of Human Health in Relation to Water Pollution".

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

No, it is not a criminal offense to contaminate land or to own contaminated land. However, penalties are given to those who do not follow the orders from the regulating authorities(Article 65, Item 1 of the Act）, or do not abide by the remediation order stipulated in the Act（Article 66 of the Act).

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

If the Owner etc. of the land who was order to take remediation measure fails to follow the instructions given by the prefectural governor under Article 7 of the Act, the governor can issue an order, and the Owner etc. who fail to follow the order will be subject to the penalty of imprisonment with work for not more than one year or by a fine of not more than 1,000,000 yen (Article 65, Item 1).

11. Can the legal entity be held liable?

The Act and the Ordinances can be applied to any legal entity, and they can be held liable if conditions are met.

12. What authority enforces cleanup?

The local authorities, such as the prefectural governor or the head of local governments hold the authority to enforce the cleanup (Article 7 Paragraph 1 of the Act**).**

13. Are there any defenses?

The form of defence would be to file for an administrative law suit against the local authority, questioning the adequacy of the decisions or procedures made (Article 3 Paragraph 5, Article 37 Paragraph 2 Administrative Case Litigation Act).

14. Can a third party/private party enforce cleanup?

It is not possible for third party/private parties to directly enforce cleanup of the land to the Owner etc. Instead, they can file for a mandamus action under Article 37 Paragraph 2 of the Administrative Case Litigation Act, and demand the administrative body to enforce cleanup order.

15. Can third parties claim damages?

Third parties can also claim damages against the administrative body not taking the stipulated Actions in the Act, under Article 1 Paragraph 1 of the State Redress Act, or claim damages and seek injunction on the basis of tort liability under the Article 709 of the Civil Code.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

It is not a legal requirement to include information on contaminating activities in the sales agreement, however, if the state of contamination in the land is a material factor to be considered by the buyer of the land, under Article 1 Paragraph 2 of the Civil code, it is a fiduciary duty of the seller to inform and explain the contaminated state of the land as much as possible. In order for the purchaser to claim damage or defect liability in case that contamination was found and the purchaser cannot achieve its purpose because of the soli contamination, it is recommended to include the purpose of use of the land so that the purchaser can claim that the land does not meet the specification (i.e., purpose of use) that the purchaser was expecting.

Also, it is a legal requirement for the real estate agent selling the land to inform the buyer when the land in question is specified as an "Area for which Changes to Form or Nature Require Notification" or as an "Area which Requires Remediation Action" under the Act. Failure to inform the buyer on the above information shall result in civil liability in damages, being subject to the instructions of operations, suspension of business, rescission of license if the circumstances are particularly serious.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Any land which had been specified as Area which Requires Remediation Action, or Area for which Changes to Form or Nature Require Notification (Article 12 of the Act) will be registered in the Registry (Article 15 of the Act) and is open to request of review except for the limited circumstances such as the editing process is in progress and the registry is not in a condition to be allowed review (4-4(3) of the Notification). In cases where the land is no longer the Area stated above, they will be deleted from the registry.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

There is no legal requirement for sellers of the land to conduct investigations of potential contamination in connection with the sale of property, and the Owners, etc. are only obliged to investigate under circumstances stipulated in the Act, i.e., (i) when the Specified Facilities will be abolished (Article 3 of the Act), (ii) when excavating the land which exceed a certain area stipulated under the Enforcement Regulation of the Act and where there is a risk of contamination exceeding the threshold stipulated under the Enforcement Order of the Act (Article 4 of the Act), or (iii) when the prefectural governor find there is a risk of harm to human health because of soil contamination (Article 5 of the Act).

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

As stated above, where the Owners etc. shall be responsible for any obligations under the Act, the purchaser of the land will be responsible for such obligation as the new "Owner etc" of the land.

19.2. Contractually?

It is possible for the Owner etc to pass its clean up liability under the Act contractually, although under the Act, the purchaser will be responsible for the liability as the Owner after becoming the owner of the land.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

It is common to investigate the state of contamination before purchasing the land in practice, and allocate the risk of contamination (mainly cost for remediation to the level satisfactory to the purchaser) between the seller and the purchaser as there is no law or regulation that requires the investigation of soil contamination in case of sale/purchase of the land.

It is recommended that the purchaser of the land include provisions in the contract providing the liabilities of the seller in case of a non-conformity (latent liability) by explicitly define the purpose of use of the land so that the purchaser can easily prove non-conformity of the land with the purpose of use of the land.

People's Republic of China

Scott Silverman, Yiwei Sun

by Baker & McKenzie, Beijing

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes. The People's Republic of China ("**PRC**") published the Soil Contamination Prevention and Control Law (the "**2019 Law**"), effective January 2019, to specifically address land contamination issues.

The 2019 Law specifies the obligations and potential liabilities of manufacturers and operators in China with respect to investigating soil contamination status, controlling soil contamination risks, and cleaning up contaminated lands.

The 2019 Law also clarifies the responsibilities of several government authorities in regulating soil contamination, with the Ministry of Ecology and Environment ("**MEE**") being primarily responsible, and other authorities such as the Ministry of Natural Resources, the Ministry of Housing and Urban-Rural Development, and the National Health Commission (among others) playing a role as well.

To provide guidance on the requirements of the 2019 Law, the MEE has issued mandatory technical standards on soil contamination investigation, risk assessment, control and remediation ("**Mandatory Standards**"), which mainly include:

(i) *Glossary of Terms of Risk Control and Remediation of Soil Contamination of Land for Construction* (HJ 682-2019) (the "Glossary");

(ii) *Technical Guidelines for Investigation on Soil Contamination of Land for Construction* (HJ 25.1-2019);

(iii) *Technical Guidelines for Monitoring During Risk Control and Remediation of Soil Contamination of Land for Construction* (HJ 25.2-2019);

(iv) *Technical Guidelines for Risk Assessment of Soil Contamination of Land for Construction* (HJ 25.3-2019);

(v) *Technical Guidelines for Soil Remediation of Land for Construction* (HJ 25.4-2019); and

(vi) *Soil Environmental Quality - Risk Control Standards for Soil Contamination of Construction Land* (Trial Implementation) (GB 36600-2018).

MEE further released the *Interim Measures for Determination of Responsible Persons for Soil Contamination of Construction Land* in 2021 ("**2021 Measures**") to resolve the uncertainty in determining the responsible person for risk monitoring and remediation of contaminated land. There are also some legacy rules that preceded the 2019 Law that remain effective and provide supplemental guidance for operators on land contamination control, such as the *Administrative Measures for the Soil Environment of Contaminated Lands* from 2017 ("**2017 Measures**"), the *Administrative Measures for the Soil Environment of Industrial and Mining Lands* from 2018, and the *Administrative Measures for the Soil Environment of Farming Lands* from 2017, all for trial implementation.

Besides the above, soil contamination is also generally governed by the *Environmental Protection Law*, specifically regulated by the *Solid Waste Pollution Prevention and Control Law*, the Regulation on Safety Management of Hazardous Chemicals, the *Agriculture Law*, etc. and in severe circumstances, subject to the *Criminal Law*.

2. Is there a definition of contaminated land?

Yes. The 2017 Measures define "contaminated lands" as "suspected contaminated lands where the pollutants exceed the relevant soil environmental standards according to the national technical specifications".

The 2019 Law further expands the implications of this definition by not only requiring that "construction lands where the pollutants have exceeded the risk control standards for soil contamination" conduct risk assessment, but also requiring that "construction lands where there are risks of soil contamination" as indicated by surveys or inspections investigate the soil contamination status so as to check the level of pollutants and see whether follow-up measures are required. This represents the Chinese government's "prevention first" principle in controlling soil contamination and the "category-based" administration of all contaminated or potentially contaminated lands.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes. The 2019 Law, the 2021 Measures and other laws and regulations mentioned in Q1 above address cleanup or remediation of contaminated lands from different perspectives. The Mandatory Standards provide detailed technical guidance for business operators and environmental practitioners on implementing the cleanup or remediation of contaminated lands.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Following the "polluter pays" principle set out in the *PRC Environmental Protection Law*, the 2019 Law made it clear that the polluter will be held responsible for the cleanup.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The 2019 Law provides that, where it is impossible to identify the responsible party for soil pollution, the land use right holder shall undertake the risk management and control for soil pollution and the restoration.

The 2021 Measures additionally provide that, where the polluter is uncertain or under dispute, the MEE will work with other related authorities to determine the polluter among the land use right holder and other entities or individuals being referred to in the soil contamination investigation or assessment reports, upon the disputing parties' request or of their own accord.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

The 2021 Measures encourage the holder of the land use rights and other possible polluters to contractually apportion the liability for property contamination among them. The concerned parties, such as the landlord and a tenant, can agree to share liability according to the degree of contamination caused by each party, or, if the degree of contamination caused by each party cannot be determined, the liability can be shared equally.

If no such contract for liability apportionment exists, the holder of the land use rights, as landlord, will be held liable ultimately, unless it can prove that the contamination was done by the tenant or obtain the government's confirmation that the tenant is the real polluter and should carry out the cleanup.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes. The holder of the land use rights to the site would be responsible for cleaning up the historical contamination on the land if the polluter could not be found.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

There are both rules specifying permissible limits to polluting substances and requiring risk assessment to be carried out in order to decide whether cleanup is necessary.

Among the Mandatory Standards, the *Soil Environmental Quality - Risk Control Standards for Soil Contamination of Construction Land* (Trial Implementation) (GB 36600-2018) specifies the permissible limits and many other technical guidelines provide practical guidance for carrying out the contamination status investigation and risk assessment.

For lands that the soil contamination investigation report indicates that the level of pollutants has exceeded the control standards, the polluter or the land use rights holder should further conduct risk assessment of the soil contamination, and provide the risk assessment report for the authorities' review and determination on whether cleanup is required.

After completing the cleanup, the responsible entity should evaluate the effect of the cleanup work and file the effect evaluation report with the local government.

6. What level of cleanup is required?

According to the Glossary, "site cleanup and remediation" means "to remove, reduce or fix the site contamination, or to keep the risk within the acceptable risk level". The "acceptable risk level" refers to the risk level that will not cause adverse effects to the exposed population, including the acceptable risk level of carcinogens and the acceptable hazard quotient of non-carcinogens. HJ 25.3 specifies that the acceptable risk levels of carcinogens and the acceptable hazard quotient of non-carcinogens.

7. Are there different provisions relating to the cleanup of water?

Yes and no. On the one hand, cleanup of groundwater has been covered by the 2019 Law, the Mandatory Standards, and other laws and regulations relating to soil contamination mentioned above.

On the other hand, cleanup of water, including groundwater, is also governed by the *Water Law*, the *Water Pollution Prevention and Control Law*, the *Regulations on Groundwater Management*, and the *Marine Environment Protection Law of China*. Polluters causing water pollution in excess of discharge limits are required to remediate within a specified time limit. If the polluter fails to remediate, the authority may appoint a qualified company to remediate at the expense of the polluter.

China also published specific technical guidelines and standards for cleanup of groundwater, such as the *Technical Specifications for Environmental Monitoring of Groundwater* (HJ/T 164), the *Technical Guideline for Groundwater Remediation and Risk Control of Contaminated Lands* (HJ 25.6-2019).

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

PFOS and PFOA chemicals are included in the *List of New Pollutants for Key Monitoring* issued by MEE from 2021 to 2023. The Chinese government prohibits importation, manufacturing and use of certain PFAS chemicals, with a few specific exemptions, and, with respect to permitted PFAS

chemicals, requires the entities that use PFAS chemicals to establish management systems to effectively prevent the leakage, loss or dispersion of such toxic and hazardous substances.

China adopts the *Stockholm Convention on Persistent Organic Pollutants* and its 2011 amendment to regulate PFAS as persistent organic pollutants ("**POPs**"). POPs fall under the category of "toxic substances" as the Supreme Court and the Supreme Procuratorate of China specified in a judicial interpretation in 2017. Therefore, PFAS should also be subject to the laws and regulations on hazardous chemicals.

We are not aware of a specific threshold for mandatory remediation of PFAS in soil or groundwater so far. The threshold of "acceptable risk level" as set out in Q6 above applies to the cleanup of PFAS as a general standard.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

It could be a criminal offense to contaminate land in severe circumstances. Under the *PRC Criminal Law*, any entity who discharges, dumps or disposes of radioactive waste, wastes containing infectious disease pathogens, toxic substances or other dangerous wastes, in violation of state regulations and causing severe environmental pollution, shall be sentenced to fines, and the responsible persons of the said entity shall be sentenced to a fixed-term imprisonment of not more than three years or criminal detention, and/or a fine. If the consequences of such discharging, dumping or disposing are exceptionally serious, then such persons shall be sentenced to a fixed-term imprisonment of not less than three years and not more than seven years, and a fine. Owning the land use rights to contaminated land is not classified as a criminal offense under PRC law.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Generally, it is not. Although the 2019 Law provides an administrative penalty of a fine of up to RMB 500,000, the *PRC Criminal Law* currently does not explicitly address situations where cleanup requirements are not met. However, if the land contamination activity is very serious, (e.g. disposed radioactive waste, waste containing the pathogen of any infectious disease, poisonous substance or any other hazardous substance, has damaged property or caused death or disability), a timely and proactive cleanup would be considered a mitigating factor, while failure to cleanup could be considered an aggravating factor to the constitution of the crime of environmental pollution as explained in Q9 above.

11. Can the legal entity be held liable?

Yes. Legal entity would be held directly liable, either administratively for its failure to comply with the 2019 Law, or criminally for severe contamination that constituted the crime. Under the circumstance where the legal entity is held liable, the entity will be subject to fines, and the staff directly in charge of the crime, or other directly responsible persons will be subject to individual criminal liabilities.

12. What authority enforces cleanup?

The main PRC government bureaus involved in the cleanup are the MEE and its local counterparts. Generally, the local ecology and environmental protection bureaus take the leading role in overseeing the cleanup. Other government bureaus at the central or local levels could also be involved, depending on the specific circumstances of the lands and the issues implicated.

13. Are there any defenses?

Yes. The *PRC Criminal Law* provides a general lack of intent defense for criminal liability, i.e., where the pollution was not the result of intent or negligence, but is attributable to factors that could not have been prevented or foreseen, the polluter could be exempted from criminal liability. Note, however, the lack of intent defense does not apply to administrative or civil liability.

14. Can a third party/private party enforce cleanup?

Generally, a third or private party cannot enforce cleanup. Under the 2019 Law and other applicable regulations, the local ecology and environmental bureaus are authorized to enforce management or control measures, supervise the cleanup plan filed by the responsible party, and review the effect evaluation report after completion of the cleanup.

15. Can third parties claim damages?

Yes. Third parties can claim damages if their legitimate rights were injured in case of environmental pollution or ecological damage, as stipulated in the 2019 Law, as well as the *PRC Civil Code* which consolidated the tort law and other civil substantive laws in China and took effect in January 2021.

According to Book Seven "Tort Liability", Chapter VII "Liability for Environmental Pollution and Ecological Damage" of the *PRC Civil Code*, in environmental tort claims, the causal connection between the contamination and injury does not have to be proved by the plaintiff; rather, the defendant will be required to prove there is no causal connection. The polluter shall bear the burden of proof as to the existence of exonerating or mitigating circumstances provided for in laws and the absence of causation between the act and the damage.

The *Environmental Protection Law* as amended in 2014 also allows for the filing of public interest lawsuits by qualified non-governmental organizations. The Supreme Court subsequently published a judicial interpretation specifying the rules for environmental public interest lawsuits.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

In a land acquisition transaction between private parties, there are no legal requirements to inform land purchaser about contaminating activities that have been carried out in the property or include such information in the contract of sale.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

There are no legal requirements to register the declaration of contaminated land in the Land Registry. However, if any survey, monitoring or inspection on the land plots conducted by the authorities from time to time indicates potential soil contamination risks, the land use right holder will be required to investigate the status of soil contamination and submit the investigation report to local ecology and environment authority for review and consideration. For land plots where the soil contamination investigation report indicates that the level of pollutants exceeds the control standard, the provincial ecology and environment authority will, together with other related authorities, review the soil contamination investigation report and publish the details of the contaminated lands that they deem to require risk control and/or cleanup on the *Lists of Construction Lands under Soil Contamination Risk Monitoring, Control and Cleanup* from time to time.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

Contamination investigation in case of property sale is not mandatorily required for all property. However, it is mandatory for "key entities for soil contamination supervision" ("**Key Entities**"), as designated by local authorities in accordance with the discharge level of toxic or hazardous substances of the entities. The Key Entities should conduct investigation on the soil contamination status when they intend to transfer the land use rights or alter the usage of the land, and the investigation report should be provided to the local land registry as a registration document, and be submitted to the local ecology and environment regulator for record-filing.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Generally, if an entity acquires land use rights, then the liability for cleaning up the current contamination, such as the existing untreated industrial solid waste, lies with the transferee, i.e. the land use rights holder, unless the parties have allocated this responsibility differently.

19.2. Contractually?

Yes. The 2021 Measures encourage the polluters to negotiate with the land use rights holder regarding the share of responsibility for soil contamination, which arguably include the cleanup liability. Note, however, such contractual arrangement would not exempt the statutorily responsible parties from fulfilling their statutory obligations. For example, the *PRC Solid Waste Pollution Prevention and Control Law* stipulates that no party is exempted from solid waste cleanup liability despite the contractual agreement.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Potential purchasers and investors of real property in China should keep abreast of not only the 2019 Law, but also the related standards and implementing regulations. Companies are advised to start considering and addressing risk allocation and liability with respect to existing or potential soil contamination when negotiating relevant agreements, such as land use grant and transfer, lease, and asset or share transfer agreements. Because of the potential for successor liability, companies should place greater importance on conducting thorough due diligence for soil contamination as a part of doing deals in China. Potential purchasers are advised to conduct, prior to their purchase, proper environmental due diligence and other surveys on the property to be purchased so as to avoid potential risks to assume the cleanup obligation as the land use right holder after the deal.

Singapore

Ken Chia, Daryl Seetoh and Victoria Wong

by Baker & McKenzie, Singapore

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes. The Environmental Protection and Management Act 1999 (the "Act") regulates land contamination. Whilst not legislation per se, the Singapore Standard SS 593:2013 Code of Practice for Pollution Control (the "Code") provides further guidance on land contamination controls, in particular technical requirements that should be complied with, and which are taken into consideration by the relevant authorities in their review and consideration of development proposals and building plan submissions in Singapore.

2. Is there a definition of contaminated land?

No, "contaminated land" is not a defined term in the Act. That said, the concept of contaminated land may fall within the definition of "pollution of the environment" in the Act, which is defined as "pollution of the environment due to the release (into any environmental medium) from any process of substances which are capable of causing harm to man or any other living organisms supported by the environment." As land is likely to be considered as an "environmental medium" (albeit not defined in the Act), the contamination of land could be covered by this broad definition.

The Act also specifies that the National Environment Agency ("NEA") may make regulations to control the pollution of land "whereby the condition of the land is so changed as to make or be likely to make the land or the produce of the land obnoxious, noxious or poisonous."

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes. The director-general of Environmental Protection ("Director-General") may, by notice in writing, require the polluter to remove and clean up the polluting matter, within a specified period to be determined by the Director-General as he considers fit.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The polluter is primarily responsible for cleanup. However, the owner may be liable as a person who permits to be discharged: (i) any trade effluent, oil, chemical, sewage or other polluting matters into any drain or land without a written permission from the Director-General; or (ii) any toxic substance or hazardous substance into any inland water so as to be likely to cause pollution of the environment.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The liability will rest with the occupier of the premises unless it can be proven that the polluter is responsible, which may be difficult if the polluter cannot be found.

For construction sites involving a principal contractor, the liability will rest with the principal contractor unless it can be proven that the principal contractor had exercised due diligence to prevent any discharge of pollutants to the land.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

All compensation, damages, fees, costs and expenses to be paid, the amount and the apportionment of the amount, and any question of liability can, in the case of a dispute, be summarily ascertained and determined by a Magistrate's Court, or if the amount claimed exceeds the limit of the Magistrate's Court, by a District Court.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The liability to clean up may include historical contamination. The liability will rest with the occupier of the premises or the principal contractor of the construction site unless proven otherwise.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

There are regulations specifying the limits of polluting substances that are permissible. For example a list of substances that are considered hazardous substances are set out in the Act.

Monitoring exercises and site assessment studies can also be carried out in various circumstances to decide if cleanup is required pursuant to the Act. For example:

- the Director-General may, by notice in writing served on the owner or occupier of any installation that is used or intended to be used to carry out activities involving the storage, handling and use of hazardous substances, require the owner or occupier to carry out an impact analysis in relation to any potential hazards that may threaten the health or safety of any person or cause pollution of the environment.
- the Director-General may, by notice in writing, require an owner or occupier of any premises from which any trade effluent or hazardous substance is generated and discharged into any land to install suitable monitoring equipment or system at any point along the line of discharge, to monitor the quality or quantity of such discharge. Records of such monitoring results have to be submitted to the Director-General, and any monitoring result that shows that any standard prescribed in the regulations has not been complied with may be admissible as evidence in any proceeding against the owner or occupier for failure to comply with the Act.

Standards and technical guidelines for assessment and remediation of sites are provided in Annex T of the Code. For example:

- When a site used for polluting activities is to be redeveloped, rezoned or reused for a non-polluting activity, a study should be conducted on the site to assess the extent of land contamination. If the site assessment study shows that the land is contaminated, the contaminated land needs to be cleaned up to standards acceptable for the intended use of the land provided.
- When a piece of contaminated land is to be leased, transferred or sold to another party for the same or other polluting activity, a site assessment study should be conducted to allow the parties involved to ascertain the extent of the existing contamination, if any. When a site is to be developed for a polluting activity, it is recommended that a site assessment study be conducted to establish the baseline soil conditions for future assessment of land contamination.

6. What level of cleanup is required?

Pursuant to the Code, where a site is proposed to be redeveloped, rezoned or reused for a non-polluting activity, the contaminated site must undergo a site assessment study to assess the extent of the contamination before being cleaned up to standards acceptable for the intended use of the land provided.

Where a site used for polluting activity is to be leased, transferred or sold to another party for the same or other polluting activity, the standards for such assessment and remediation of the site are provided under Annex T of the Code.

7. Are there different provisions relating to the cleanup of water?

No. The cleanup provisions apply to the cleanup of water as well.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

PFAS substances are regulated as a type of hazardous substance pursuant to the Act (see pentadecafluorooctanoic acid, its salts and related compounds; perfluorohaxane sulfonic acid, its salts and related compounds; and perflourooctane sulfonic acid), but there is no specific regulation on mandatory remediation of PFAS in soil or ground water in Singapore.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Yes.

Any person who contaminates land without written permission from the Director-General will be guilty of an offence. For the first conviction, a fine not exceeding SGD 20,000 may be imposed, and in the case of a continuing offense, a further fine not exceeding SGD 1,000 for every day or part thereof during which the offense continues after conviction may be imposed. For the second or subsequent conviction, a fine not exceeding SGD 50,000 may be imposed, and in the case of a continuing offense, a further fine not exceeding SGD 2,000 for every day or part thereof during which the offense continues after conviction may be imposed.

Any person who discharges a toxic or hazardous substance into any inland water causing pollution to the environment (including land contamination) will be guilty of an offence. For the first conviction, a fine not exceeding SGD 50,000 and/or imprisonment for a term not exceeding 12 months may be imposed. For the second or subsequent conviction, a fine not exceeding SGD 100,000 and imprisonment for a term between 1 to 12 months may be imposed.

The court may, in addition to the above fines, order the offender to pay to the Director-General the amount of any expense incurred in connection with the execution of any work, together with any interest due thereon or any interest certified by the Director-General to be due from the offender at the date of his or her conviction.

Ownership of contaminated land per se does not constitute an offense.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Yes. Any person who fails to comply with a notice issued by the Director-General in relation to the cleaning up of polluting matter is guilty of an offence and liable on conviction to a fine not exceeding SGD 50,000.

11. Can the legal entity be held liable?

Yes, Any person can be guilty of an EPMA offence, and persons include any company or association or body of persons, corporate or unincorporate, pursuant to the Interpretation Act.

12. What authority enforces cleanup?

The NEA.

13. Are there any defenses?

Yes, the rebuttal of presumptions as described in question 4.2 above. In addition, whilst not a defense per se, the NEA may, subject to the directions of the Minister, exempt either permanently or for a period of time, any person, thing, premises or works or any class of person, thing, premises or work from any provision of the Act.

14. Can a third party/private party enforce cleanup?

No.

15. Can third parties claim damages?

Yes, third parties could potentially claim damages under general tort law.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No, there is no legal requirement to disclose past contaminating activities carried out in the property, and including such information in the contract of sale. The principle of caveat emptor generally applies in Singapore and the buyer's responsibility to do due diligence on the property before purchase, including finding out about potential contaminating activities that have been carried out in the property. This due diligence can take the form of a site assessment. The Code recommends that a site assessment study be conducted when:

- a site used for polluting activities is to be redeveloped, rezoned or reused for a non-polluting activity.
- a site is to be developed for a polluting activity. The Code contains a list of "polluting activities," which are subject to site assessment before change of use or rezoning. Examples of activities include oil installations, chemical plants, gas works, power stations and landfill sites.
- a site used for polluting activities is to be leased, transferred or sold to another party for the same or other polluting activity.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No, there is no legal requirement to register the declaration of contaminated land in the Singapore Land Registry.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No, there is no legal requirement to conduct investigations of potential contamination in connection with the sale of property.

However, note that Jurong Town Council imposes an Environmental Baseline Study ("EBS") requirement on industrial land, prototype factory and standard factory sites with pollutive activities. The EBS will be imposed when one seeks to transfer ownership of the property.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Yes, the purchaser could potentially find himself liable, given the presumption under the Act that the occupier of contaminated land is viewed as the party that discharged or caused or permitted to be discharged any trade effluent, oil, chemical, sewage or other polluting matters, unless he or she can prove otherwise.

19.2. Contractually?

Yes, presumably by way of an indemnity from the purchaser to cover any subsequent fines, penalties, costs or expenses incurred as a result of any regulatory action. It is unlikely that penalties such as imprisonment can be contractually passed to the purchaser.

In terms of liability in a lease scenario, it is highly likely for a lessee to be contractually liable to the landlord/owner for any contamination of the leased premises. For example, it is common for the Jurong Town Council as lessor to include standard contractual language that its lessee will indemnify Jurong Town Council against all damages, claims and actions caused by any potential contamination and would be responsible for any remediation at the time of reversion of the land upon expiry of the lease.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

A potential purchaser of a piece of contaminated land may wish to carry out a site assessment study and cleanup with the help of experts. Standards and technical guidelines that may be adopted for site assessment and remediation of contaminated land are provided in the Code.

Taiwan

Tiffany Huang and Su-Fen Chen

by Baker & McKenzie, Taipei

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes.

2. Is there a definition of contaminated land?

Yes. The Soil and Groundwater Pollution Remediation Act (SGPRA) provides a definition of "soil pollution" (i.e., contaminated land) as the introduction into soil of substances, biological organisms or forms of energy that alter soil quality, impact the normal use of the soil, or endanger public health and the living environment.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The polluter is primarily responsible for the cleanup.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

No. If the polluter cannot be found, the governmental agencies concerned will take the necessary cleanup measures. However, if an owner, administrant or user of a piece of land fails to demonstrate due diligence as a good manager, in the event that a piece of polluted land is officially declared a control site or remediation site, he or she, along with the polluter, shall be held jointly and severally liable by the competent authorities for the costs incurred in the cleanup.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

The owner and the occupier will be jointly liable. However, the nonpolluting party can claim reimbursement of his or her cleanup expenses from the polluter.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

No. The polluter who has caused the historical contamination will be liable for the cleanup; if the polluter is not available, a fund established by government will pay for that.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The Environment Protection Administration (the central competent authority) promulgated The Standards for Soil Pollution Control and The Standards for Groundwater Control, which specify the limits to polluting substances allowed in the soil and groundwater, respectively.

6. What level of cleanup is required?

A cleanup is usually required at a level when the concentration of the contaminant substance has been reduced to below the permitted concentrations stipulated in the Standards for Soil Pollution Control and the Standards for Groundwater Control.

However, where factors such as the geological conditions, pollutant characteristics or pollution remediation technologies preclude remediation until pollutant concentrations are less than soil and groundwater pollution control standards, the party who is responsible for the cleanup may provide soil and groundwater pollution remediation goals based on environmental impact and health risk assessment results, and submit the same for the authority's approval. After obtaining the central competent authority's approval, the cleanup will be required at the level set forth in the remediation goals, instead of below the applicable control standards.

7. Are there different provisions relating to the cleanup of water?

The requirements for the cleanup of groundwater are the same as those for soil, and both are provided under the SGPRA.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

No.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

It is not a criminal offense to own contaminated land.

It is an offense, however, to contaminate land, but criminal punishment applies only when the polluter deliberately contaminates the land.

The SGPRA stipulates: "Those that pollute the soil deliberately with the intention to change the classification of land use shall be punished by one to five years of imprisonment and may be fined a maximum of NTD1 million."

Further, "…those who pollute soil or groundwater deliberately, causing land to become a pollution control site or remediation site, shall be punished with one to five years of imprisonment." In addition, "If the violations in the foregoing paragraph cause death, the violators shall be punished by life imprisonment or a minimum of seven years of imprisonment, and may be fined a maximum of NTD5 million; those that cause severe injury shall be punished by three to 10 years of imprisonment and may be fined a maximum of NTD3 million."

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Noncompliance with cleanup ordered by the authorities may subject the noncomplying party to fines not exceeding NTD1 million. If such noncompliance causes death or injuries, the noncomplying party may be subject to criminal penalty that may extend to a life sentence in prison.

11. Can the legal entity be held liable?

Yes.

- Administrative law liabilities: If the polluter is a legal entity, it will be the entity subject to the administrative law liabilities, such as fines and cleanup obligations.
- Civil law liabilities: If the polluter is a legal entity, it may be subject to civil law liabilities, such as compensation for damages suffered by third parties.
- Criminal liabilities: Although the criminal liabilities are primarily on the individual wrongdoer, Article 36 of SGPRA provides that if a representative, agent, employee or other working personnel of the legal entity violates, due to the performance of business activities, certain provisions under SGPRA which lead to criminal liabilities, in addition to the perpetrator being punished pursuant to the regulations of each article violated, the legal entity shall also be fined pursuant to the regulations of each article violated.

12. What authority enforces cleanup?

The Environment Protection Bureau of the local government concerned enforces cleanup.

13. Are there any defenses?

As cleanup is the absolute liability of the polluter, under such a situation, we believe the defenses shall pertain only with regard to: (i) whether the named polluter is the actual polluter or the only polluter; and (ii) the extent to which the polluter shall be required to clean up, including whether the method requested by the regulator is feasible or practical.

14. Can a third party/private party enforce cleanup?

The SGPRA provides that the victims or public interest groups may request the authority concerned to implement a cleanup measure, and if the latter fails to do so, the victims or public interest groups may file a suit in court to seek a ruling that orders the authority to perform its duty.

15. Can third parties claim damages?

No.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Yes. Once the environmental authority declares a site to be a control site or remediation site, it will also ask the land registration agency to enter such declaration information in the Land Registry.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

Yes. The SGPRA requires land owners/users to conduct investigations under the following circumstances:

- The transferor of a piece of land who is in one of certain industry sectors designated by EPA should provide soil contamination investigation data when turning over the land. If the land is declared a control site or remediation site after the transfer, the transferor who fails to provide such data during the transfer will still be treated as the owner of the contaminated land, even though the ownership of the land has been transferred.
- An entity that is in one of certain industry sectors designated by EPA shall submit the soil contamination investigation data for the local environmental regulator's review before it applies for establishment and cease of operations, changes its line of business, or changes the boundary of its site. Without such data, the authorities may not grant the license needed for the entity's establishment or cease of operations (e.g., factory license).

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

No. The polluter will still be liable even after he or she sells the land; the polluter cannot pass the cleanup liability to the purchaser.

19.2. Contractually?

No. Even if the polluter and the land purchaser enter into a contract that passes the liability to the purchaser, the government agencies concerned will still hold the polluter liable for the cleanup.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

If the land is used by enterprises designated by the EPA, the current land owner shall provide investigation data before the land is turned over; otherwise, the land owner will not be released from possible liability afterward.

Thailand

Nam-Ake Lekfuangfu and Narawit Rujanant

by Baker & McKenzie, Bangkok

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

No, there is no specific legislation relating to land contamination.

The primary legislation in relation to establishing an administrative framework and a basis for action on all environmental issues is the Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (1992) ("**NEQA**"). Notification of the National Environment Quality Committee No. 25 (B.E. 2547) regarding Standards of Soil Quality (the "**Notification**"), issued under NEQA, sets out acceptable levels of soil contamination. For this purpose, the Notification divides soil into two main categories:

- Soil used for the purposes of living and agriculture
- Soil used for other purposes

In this respect, the acceptable level of contamination for each category of soil depends on the amount of certain compounds in the soil. In addition, the Notification establishes specific methods of testing soil for contamination with regard to each type of compound.

Moreover, the Land Development Act B.E. 2551 (2008) ("LDA") also empowers the Ministry of Agriculture and Cooperatives to regulate the utilization of the land that uses or is contaminated by chemicals or other materials that could cause derogation to the land's agricultural utilization. LDA also prescribes appropriate measures to remedy the said land.

2. Is there a definition of contaminated land?

No, there is no definition given for "contaminated land." The Notification defines "standard of soil quality," but does not define substandard soil as "contaminated land." The quality standards set under the NEQA merely indicate a benchmark for desirable environmental conditions. As such, NEQA imposes no punishment on someone who degrades the soil of a particular piece of land to a level that does not meet the quality standards. However, strict civil liability may apply if such degradation causes harm to an individual's life, health or property.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Although there is no specific piece of legislation regarding land contamination, the general remedy for environmental contamination/pollution provided under the NEQA is that of compensation. Generally, the owner or possessor of the source of pollution is liable to compensate for damages, regardless of whether the leakage or contamination is the result of a willful or negligent act committed by the owner or possessor. Such compensation includes reimbursement for all expenses incurred by the government to clean up any pollution arising from the leakage or contamination.

Moreover, under the LDA, a polluter is required to restore the said land back to its original condition or compensate the state or persons suffering damages from the contamination in the case of land contamination.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Under the NEQA, land owners or persons who possess the land (e.g., tenants) are liable for compensation and cleanup costs. For example, the owner of a factory is responsible for compensation and cleanup costs related to the emission of wastewater that causes damage to the public. However, if the owner leases the factory to a tenant, and during the time the tenant occupies the premises, the factory emits harmful wastewater, the tenant will be responsible for compensation and cleanup costs.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The LDA is silent on the situation in which the polluter could not be located. In this regard, it is possible that the land owner or the person possessing the land at the time it was contaminated would still be held responsible under the NEQA.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

If it is found that both the owner and the tenant caused such contamination, they will equally share responsibility for the cleanup costs (as well as compensate injured/damaged third parties).

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The LDA broadly states that the polluter is required to restore the land to its original condition. However, it is currently unclear whether the polluter would be required to restore the contaminated land back to the condition just before his/her action, or before the land was contaminated in the first place. In practice, it is often difficult to determine when the land is contaminated. Therefore, based on the LDA, it is possible that all of the polluters (to the extent that they can be found) may be jointly liable for the cleanup of the land until it is restored to its original, non-contaminated condition.

Moreover, pursuant to the NEQA, the person/entity that owned or occupied the land at the time it was contaminated may also be held jointly liable with the polluters for the cleanup of the land as well.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

There is no regulation in place that specifically determines when or whether cleanup is required. In this regard, the LDA merely provides that in the case of land that uses or is contaminated by chemicals or other materials that could cause derogation to the land's agricultural utilization, cleanup or compensation would be required, without prescribing a specific level of polluting substances that is permissible or a form of risk assessment. In practice, however, cleanup may be required by the local authority upon the occurrence of contamination or by a court order. If a case has not been filed with the court, the task of cleaning up will depend on the discretion of the relevant authority. In this regard, the court or the official may use the level of compounds within the soil as prescribed under the NEQA as reference to determine whether land has been contaminated and/or whether cleanup is required.

6. What level of cleanup is required?

As there is no specific regulation determining whether cleanup is required, the level of cleanup is determined on a case-by-case basis. Please see Item 5.

7. Are there different provisions relating to the cleanup of water?

Yes, there are, and they are as follows:

- With respect to wastewater treatment, according to the NEQA, the owner or the possessor of wastewater has a duty to put a wastewater treatment system, as prescribed by law, in place and utilize such treatment system for the treatment of wastewater prior to the disposal. Otherwise, the owner will be punished by imprisonment not exceeding one year, or a fine not exceeding THB 100,000, or both.
- In respect of oil spills into water, the Regulation of the Office of the Prime Minister on the Prevention and Combating of Water Pollution Caused from Oil, B.E. 2547 (2004) sets out how government authorities can establish contingency plans in the event of water pollution caused by oil spills. The relevant governmental authorities or state enterprises are authorized to take legal action to claim compensation from the polluter, provided they took action to remedy the consequences of such pollution.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

No, there is no threshold for mandatory remediation of PFAS in soil or groundwater under Thai law.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

No, it is not a criminal offense to own contaminated land or to contaminate land. However, under the LDA, in the event that the Ministry of Agriculture and Cooperatives has issued a rule/measure governing the utilization or prohibition of certain contaminated land, violators of such a rule/measure could be subject to a maximum of three months of imprisonment and/or a maximum penalty of THB 5,000.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

There is no direct penalty for not complying with a requirement to clean up contaminated land. However, in the case where the point souce of the pollution is a factory under the Thai Factory Act B.E. 2535 (1992), government authorities can close a factory temporarily or permanently if its operations has caused, is causing and/or may cause serious harm, injury or trouble to persons or property in the factory or in its vicinity, as well as prohibit certain actions/activities in relation to the contaminated land. If the polluter, land owner or possessor refuses to clean up or to pay cleanup costs, the relevant authority can also request that a Thai court issue an order seizing the assets of the polluter, land owner or possessor, as the case may be, and sell such assets by public auction, in order to obtain remuneration for the cleanup expenses.

11. Can the legal entity be held liable?

Yes. Also, if a criminal offense under the NEQA or the LDA is imposed on a juristic person and such offense derived from an order or an action of a director or manager or any person responsible for the operations of the juristic person, or if that person has the duty to issue an order or to take an action but failed to do so and thereby caused the juristic person to have committed the offense, that person will be liable to the punishment provided for the offense as well.

12. What authority enforces cleanup?

Under the NEQA, the authorized agency overseeing environmental enforcement is the Department of Pollution Control. Under the LDA, the responsible authority is the Land Development Committee, Ministry of Agriculture and Cooperatives.

13. Are there any defenses?

The polluter may not be liable under the LDA if he or she can prove that he or she did not cause the land contamination. Pursuant to the NEQA, the land owner or possessor will not be liable for cleanup costs (or compensation to injured/damaged third parties), if he or she can prove that the contamination was the result of:

- *force majeure* or war;
- an act done in compliance with an order of the government or a state authority; or
- an act or omission of the person who sustained injury or damage, or of any third party (e.g., the previous land owner).

14. Can a third party/private party enforce cleanup?

No. Only the government has direct authority in respect to cleanup enforcement. However, a private party suffering damages from the land contamination may indirectly enforce the cleanup by requesting the relevant governmental authority or the court to look into the issue and enforce the cleanup.

15. Can third parties claim damages?

Yes. Third parties may claim damages on the grounds of wrongful acts, under Section 420 of the Civil and Commercial Code, if the contamination causes injury to the life, body, health, liberty, property or other rights of a person (even if the quality of the land meets the benchmark prescribed by the Notification).

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No, there is no such requirement. However, under general principles of the sales contracts, the seller is liable for any defect, including contamination, in the land sold that impairs either its value or its fitness for the purposes of the contract, unless the purchaser knew of the defect at the time of sale, or would have known of it if he or she had exercised such care as might be expected from a person of ordinary prudence. Any limitations of the seller's liability for defect will not be enforceable against any liabilities arising from facts known to but intentionally concealed by the seller.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No, there is no such requirement.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No, there is no such requirement. Please see our response regarding the liabilities for defect in item 16 above.

However, the burden of proof for defect (i.e., the contamination) could become a problem for the purchaser. If the purchaser cannot prove that the land contamination was caused by the seller, the purchaser would eventually be liable or responsible for the contaminated land.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

No.

19.2. Contractually?

As the LDA specifically states that the polluter is liable for cleanup, in case the polluter is the seller, it would not be possible for the seller to contractually pass this cleanup liability under the LDA to the purchaser. However, the polluter may contractually request the purchaser to subsequently indemnify him or her against any loss or compensation that it may suffer as a result of this cleanup obligation.

However, under the NEQA, since the owner/possessor of the contaminated land is also assumed to be liable or responsible for the contaminated land, unless the purchaser (i.e., the current owner/possessor of the land) can prove that the land contamination was caused by the seller (i.e., the previous owner), the purchaser would generally be liable or responsible for the cleanup.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

It is generally advisable for purchasers of land to conduct environmental due diligence in order to determine the status of the land at the time of purchase. However, there is no legal requirement in this regard. An environmental assessment will establish baseline contamination levels on the land at the time of purchase. If the purchaser is subsequently accused of land contamination, he or she can prove his or her non-involvement based on such environmental due diligence.

Vietnam

Oanh Nguyen, Phuc Thuy Hien Nguyen, Nguyen Minh Ta

by Baker & McKenzie, Ho Chi Minh

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

There are no statutes specifically dealing with land contamination in Vietnam. However, the Law on Environmental Protection (**LEP**)[27] and its implementing regulations form the legislative foundation for environmental regulation.

2. Is there a definition of contaminated land?

There is no specific definition of contaminated land. The LEP provides the following related definitions:[28]

- *Environmental composition* refers to material elements that comprise the environment, such as land, water, air, living beings, sound, light, and other forms of material.
- Environmental pollution pertains to a change in the physical, chemical and biological qualities of environmental composition that does not conform to environmental technical standards and environmental standards and adversely affects human beings and other living beings.
- Environment degradation refers to a deterioration in the quality and quantity of the environmental composition, which and adversely affects human beings and other living beings.
- Environmental incident refers to any incident occurring during the course of business of humans or due to irregular changes in nature, which causes serious environmental pollution or degradation.

The Land Law [29] and Decree No. 91[30] (on sanctions relating to land) provides the following definitions:

- *Destruction of land* refers to any act which deforms the land, deteriorate the quality of the land, causes land pollution or reduce the usability of the land according to a determined purpose.
- Land pollution refers to the act of introducing into the land toxic substances, microorganism or parasites that harm plants, domestic animals and humans.

The LEP provides a national set of environmental technical standards[31] that include quality standards for the surrounding environment as well as for waste management, which should be complied with for all investment projects. Quality standards for the surrounding environment are classified into groups of technical standards for the following:

- Soil and sediment quality

[27] Law No. 72/2020/QH14 on Environmental Protection, adopted by the National Assembly on 17 November 2020, and taking effect on 1 January 2022 (LEP).
[28] LEP, Articles 3(3), 3(12) and 3(13)
[29] Law No. 45/2013/QH13 on Land, adopted by the National Assembly on 29 November 2023, and taking effect on 1 July 2014, Article
[30] Decree No. 91/2019/ND-CP dated 19 November 2019 of the Government, Sanctions of Violations in the Field of Land ("Decree No. 91")
[31] LEP, Article 97(1) and 97(2)

- Surface water, groundwater and sea water quality
- Air quality
- Light and radiation levels
- Noise and vibration

Based on the general definitions above, it seems that land contamination may involve any change or deterioration in the composition of the environment that causes the quality of the land to fall below the quality standard for that land's specific use will be considered land pollution or land contamination.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes, the LEP, Decree No. 08[32] (guiding the LEP) and Decree No. 45[33] (on environmental sanctions) provide for the remediation of contaminated environments, including contaminated land. In particular, such remediation may be undertaken by either the polluter or the government, depending on what or who caused the pollution. If the polluter caused the contamination (i.e. environmental pollution, degradation or incident as defined above), it would be responsible for the cleanup.[34] If the pollution is caused by a natural disaster or an unidentified source, the government would be responsible for the cleanup.[35]

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Under environmental protection regulation, the polluter has primary responsibility for cleanup.[36] More specifically, whoever causes an environmental incident shall bear the costs of responding to it.[37] This is consistent with the principle of "polluter pays" under the Vietnamese Constitution and international law. Under other sets of legislation, such as the Civil Code,[38] it is implied that the landowner[39] would not be responsible for the cleanup if the landowner did not directly cause the pollution.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The LEP provides that the State/government shall rectify and restore the contaminated land if the land pollution is caused by historical factors or if the polluter cannot be found.[40]

The LEP provides that a principle that any organization or individual shall not be liable for environmental damages if they can show that they have not caused the environmental damage, have complied with environmental regulations and possessed adequate environmental protection system.[41]

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[32] Decree No. 08/2022/ND-CP dated 10 January 2022 of the Government, providing detailed regulations on certain provisions of the LEP ("Decree No. 08")
[33] Decree No. 45/2022/ND-CP dated 07 July 2022 of the Government, Sanctions of Violations in the Field of Environmental Protection ("Decree No. 45")
[34] LEP, Article 4(6)
[35] LEP, Article 127
[36] LEP, Article 15(2)
[37] LEP, Article 121(3)
[38] Civil Code, Article 172
[39] Please note that under Vietnamese law, no one is entitled to privately own land. Instead, the people, as represented by the government, are the actual owners of all the land in Vietnam. Therefore, although we do not revise this term, please always bear in mind that the correct term is "land user."
[40] LEP, Article 15(3)
[41] LEP, Article 130(4)

However, there are disagreements on whether this provision actually refers to a complete waiver of liability in the case of the land owner or occupier.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

The landlord and the tenant may agree under the lease agreement that whichever party causes land pollution during the lease term will be liable for the cleanup. In practice, if control of the land has passed to the tenant, the tenant will usually be required to be liable for its activities on the land. Such an agreement is not inconsistent with the abovementioned principles of the LEP and the Civil Code. Therefore, if the occupier is the *de facto* land user and the owner is not allowed to interfere with the occupier's business on the land during the lease term (as usually agreed in a land lease agreement), it is very likely that the occupier will be fully liable for the land contamination.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Based on the abovementioned provisions, landowners should not be liable for cleaning up past contamination if they were not responsible for the corresponding contamination. If the past polluter could be identified and fails to implement rectification at the request of the authorities within the time frame provided by the authorities, the authorities may choose to grant up to 24 months extension or take the necessary enforcement action.[42] If a government-sanctioned investigation determines that the land needs cleanup, and the past polluter could not be found, the government would be responsible for the cleanup and should therefore bear the corresponding expenses.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Remediation is required after an investigation (conducted by the government) concludes that the land is contaminated and needs remediation. The government shall supervise the remediation process if the environmental incident is caused by any project or establishment.[43]

Depending on the case, it is up to the authorities to determine whether remediation is required and which form of remediation to apply. There are many forms of remediation, including, for example, restoration of the environment, rectification of the pollution, demolition or relocation of pollution-causing works, destruction of pollutants, or re-export of pollutants (if they are imported).[44]

Land pollution can be classified into three levels: pollution, serious pollution and extra-serious pollution.[45] There are more detailed criteria to determine these levels of land pollution under Circular No. 02.[46]

Limits to polluting substances are specified in national and industry environmental standards, which can be updated from time to time and are still being perfected. Below are some applicable soil-related standards:

- QCVN 15:2008/BTNMT - These are national technical standards on the pesticide residues in the soil (issued according to Decision No. 16/2008/QD-BTNMT, adopted by the Ministry of

[42] Decree No. 45, Article 70(1)(d)
[43] LEP, Article 19(3)(a) and 126(1)
[44] Decree No. 45, Article 4(3)
[45] LEP, Article 16(3)
[46] Circular No. 02/2022/TT-BTNMT, dated 10 January 2022 of the Ministry of Natural Resources and Environment, providing detailed regulations on certain provisions of the LEP (Circular No. 02)

Natural Resources and Environment on 31 December 2008, promulgating the National Environmental Technical Standards)

- QCVN 45:2012/BTNMT - These are national technique regulations on the allowable limits to dioxin in soils (issued according to Circular No. 13/2012/TT-BTNMT, adopted by the Ministry of Natural Resources and Environment on 7 November 2012, promulgating the national technical standards on allowed limits of dioxin in soils).
- QCVN 54:2013/BTNMT- These are national technical regulation on remediation target values of persistent organic pesticides according to land use (issued according to Circular No. 43/2013/TT-BTNMT, adopted by the Ministry of Natural Resources and Environment on 25 December 2013, promulgating the national technical standards on remediation target values of persistent organic pesticides according to land use).
- QCVN 03-MT:2015/BTNMT - These are national technical standards on the allowable limits to heavy metals in the soils (issued according to Circular No. 64/2015/TT-BTNMTT, adopted by the Ministry of Natural Resources and Environment on 21 December 2015, promulgating the national technical standards on environment).
- QCVN 03:2023/BTNMT - a unified technical standards which aim to incorporate and update the standards above, to be effective on 12 September 2023 (issued according to Circular No. 01/2023/TT-BTNMT, adopted by the Ministry of Natural Resources and Environment on 13 March 2023).

6. What level of cleanup is required?

In general, cleanup level shall be set by competent authorities on a case-by-case basis, but this should also be based on the statutory national standards or the condition of the soils before being contaminated. In some cases, the land must be restored to its original condition.

7. Are there different provisions relating to the cleanup of water?

The LEP and Decree No. 45 (on environmental sanctions) do not provide separate provisions on the cleanup of soil/land. The provisions on cleanup apply to both water and soil/land.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

None.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Yes, under the Penal Code, contaminating land may be a criminal offense that can lead to heavy fines and possibly jail time, but merely owning contaminated land that was not polluted by the owner should not be a criminal offense. If contamination is not serious enough to warrant criminal liabilities, administrative sanctions may apply.[47]

In particular, below are some examples of offences which are subject to a fine of up to VND 03 billion (about USD 129,000) or imprisonment of up to seven years, or both:[48]

[47] Law No. 15/2012/QH13 on Administrative Sanction Proceedings, adopted by the National Assembly on 20 June 2012, and effective 1 July 2013 ("Law on Administrative Sanction Proceedings", Articles 62 and 63)
[48] Law No. 100/2015/QH13 on the Penal Code, adopted by the National Assembly on 27 November 2015, and effective 1 January 2018, as amended by Law No. 12/2017/QH14 on Amendments of and Supplements to a Number of Provisions of the Penal Code ("Penal Code"), Article 235.

- Burying, dumping or discharging into the environment from 1,000 kg of hazardous wastes or persistent organic pollutants (POPs) in the Stockholm Convention
- Discharging into the environment from 500 m3/day of wastewater whose pollution indicators exceed the limits in technical regulations on wastes from 05 times or more
- Discharging into the environment wastewater that contain radioactive substances that cause contamination from 02 times the permissible limits in technical regulations
- Discharging into the environment 150,000 m3/day of gas emission exceeding the limits in technical regulations 10 times or more
- Burying, dumping or discharging into the environment from 100,000 kg of ordinary solid wastes in contravention of the law
- Causing serious, very serious or especially serious consequences.

Additional penalties, such as prohibitions on holding certain posts, practicing certain professions or performing certain jobs for up to five years may also apply to convicted offenders in such cases.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

See Sections 4.4 and 8.

11. Can the legal entity be held liable?

Yes. A legal entity may face tougher fines of up to VND 20 billion (around USD 860,000), as well as possible suspension of some or all of the legal entity's operations for up to 03 years.[49] Suspension can be permanent in case the authorities consider that there is a possibility of cause loss of human life, environmental incidents or negative impacts on public order and safety, for which full remediation is not possible.[50]

12. What authority enforces cleanup?

The following authorities have the right to enforce a cleanup:

- Local authorities - Chairperson of People's committees at the ward, district and provincial levels[51]
- Police - Chiefs of commune, district and provincial police, border gate police, export processing zone police, Environmental police, etc.[52]
- Environmental authorities - Environmental inspectors of the Ministry of Natural Resources and Environment and provincial departments of natural resources and environment, etc.[53]
- Other officials empowered to apply administrative sanctions when they find violations of environmental regulations in their respective fields or jurisdictions.

13. Are there any defenses?

Decree No. 45 (on environmental sanctions) provides defense only in cases where the administrative sanction's prescription period has expired. The prescription period to impose administrative sanctions in the field of environmental protection is 02 years (from when the authorities discovered the ongoing

[49] Penal Code, Article 235(5)
[50] Penal Code, Article 79
[51] Decree No. 45, Article 56
[52] Decree No. 45, Article 57
[53] Decree No. 45, Article 58

violation, or when authorities took the samples if the violation has ended). 54 However, this prescription period does not apply to remediation, or cleanup (The Law on Administrative Sanction Proceedings provides that in case the prescription period has ended, the authorities may not levy the fines, but can still confiscate certain objects, and apply the measures to rectify the consequences of the violation 55).

Only the Penal Code provides defenses for criminal liability. Naturally, the principle of innocence until proven guilty applies. Other than that, the following may be used as defenses against the application of criminal penalties:56 (i) unforeseen events; (ii) lack of capacity for criminal liabilities due to mental illness; and (iii) emergency situations.

The accused may appeal the decision of the Court in the case of criminal trials, or appeal the decision of the competent authority imposing administrative sanctions.

14. Can a third party/private party enforce cleanup?

No. Only government authorities have the right to enforce a cleanup.

15. Can third parties claim damages?

Yes. Third parties/private parties may claim damages under the principle that a polluter is liable for damages, even if he or she is not at fault.[57] The LEP provides that "*organizations and individuals that suffered loss of life, damages to health, assets and their legitimate interests*" may authorize the government or begin legal action by themselves.[58]

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

There is no such requirement.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

There is no such requirement. However, the local government has the responsibility to investigate, assess, determine and zone such areas that are at risk of pollution within their jurisdiction, and allocate responsibilities to entities causing pollution.[59] This information should be published in the government's database.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

There is no such requirement.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

The Civil Code technically allows an obligor to transfer its civil liabilities to a third party if the obligee approves.[60] However, it is unclear whether the cleanup liability is considered a civil liability because

[54] Decree No. 45, Article 5
[55] Law on Administrative Sanction Proceedings, Article 65(2)
[56] Penal Code, Article 20, 21 and 23
[57] Civil Code, Article 602
[58] LEP, Article 131(1)
[59] LEP, Article 19(3)
[60] Civil Code, Article 370

this liability should be, first and foremost, a liability to the government. Moreover, the LEP is silent on whether such liability is transferable. In practice, the authorities may, at their discretion, allow the landowner (who is also the polluter) to pass its cleanup liability to the purchaser, provided the landowner-polluter has settled all other penalties imposed by the authorities.

19.1. Under the general law?

See above.

19.2. Contractually?

See above.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Although an investigation of land contamination is not a legal requirement, potential land purchasers, especially industrial zone and residential developers, are strongly advised to conduct environmental/land surveys of their target property prior to purchase, and to report the results of such surveys to the competent authorities if contamination is found. This practice is meant to prevent any potential confusion and liabilities should contamination be found later and determined to have been caused by the purchaser.

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

There is no unified codification relating to land contamination. The most important provisions regarding land contamination are split among the following statutes:

- The Water Act (*Wasserrechtsgesetz*)
- The Waste Management Act (*Abfallwirtschaftsgesetz*)
- The Industrial Code (Gewerbeordnung)
- The Forestry Act (Forstgesetz)
- The Rehabilitation of Historic Contamination Act (*Altlastensanierungsgesetz*)
- The Federal Environmental Liability Act (*Bundes-Umwelthaftungsgesetz*)

Further provisions for protection can be found in the Chemicals Act (*Chemikaliengesetz*), the Law on Fertilizers (*Düngemittelgesetz*), the Plant Protection Act (*Pflanzenschutzgesetz*) and the associated directives issued. Aside from these, there are numerous waste management laws and environmental protection laws in the federal provinces, which are amended rather frequently.

2. Is there a definition of contaminated land?

There is a definition for historical contamination (Altlasten):

"Historic contamination means existing waste deposits and abandoned polluted areas as well as soils and groundwater vessels from which substantial danger to human health or the environment are emitted according to the results of an assessment of endangerment. (see Section 2 Paragraph 1 of the Rehabilitation of Historic Contamination Act [*Altlastensanierungsgesetz*])

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

All of the laws enumerated under 1 stipulate direct or indirect provisions dealing with the cleanup or remediation of contaminated land. The most important laws are the Federal Environmental Liability Act (*Bundes-Umwelthaftungsgesetz*), the Rehabilitation of Historic Contamination Act (*Altlastensanierungsgesetz*), the Water Act (*Wasserrechtsgesetz*), the Waste Management Act (*Abfallwirtschaftsgesetz*) and the Industrial Code (*Gewerbeordnung*). In addition to these laws, other laws stated under 1 may apply, of which especially the Environmental Protection Laws of the Federal States have to be observed.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The Federal Environmental Liability Act (*Bundes-Umwelthaftungsgesetz*): Primarily the polluter, that is, the operator in terms of the Act. An operator within the meaning of the Act is any natural or legal person under private or public law who carries out or determines the professional activity, alone or

through assistants, including the holder of an authorisation or permit and the person who makes the notification or notification.

The Water Act (*Wasserrechtsgesetz*): Primarily the polluter or whoever else has the factual power to immediately stop any pollution and restore the original state of the land.

The Waste Management Act (*Abfallwirtschaftsgesetz*): Primarily the person who has handled the waste in an unlawful manner, which is, in most cases, the polluter.

The Industrial Code (*Gewerbeordnung*): Primarily the operator of an industrial plant, who is ex lege deemed to be the polluter, unless he or she can prove the pollution already existed before the launch of the plant.

The Rehabilitation of Historic Contamination Act (*Altlastensanierungsgesetz*): The law refers to the laws mentioned above; as a consequence, the polluter is primarily responsible in the majority of cases.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The Federal Environmental Liability Act (*Bundes-Umwelthaftungsgesetz*): In case the polluter (i.e., operator in terms of the Act) cannot be identified or the costs cannot be recovered from the operator for any reason, the owner/s of the affected premises may be held liable. (stimmt, § 8).

The Water Act (*Wasserrechtsgesetz*): The liability is passed on under the conditions stated in Section 31 Paragraph 4 of the Water Act; if the obligated polluter or the operator in terms of the act cannot be required to reimburse corsts, then the property owner will be liable, if he agreed to the act, causing the pollution or voluntarily tolerated it and has failed to take reasonable countermeasures. This shall also apply to the legal successors of the property owner if they were aware of the installations or measures from which the danger emanates or should have been aware of them, if they had paid due attention.

The Waste Management Act (*Abfallwirtschaftsgesetz*): The liability is passed on to the owner according to Section 74 of the Waste Management Act. The liability is passed on if the owner agreed to the unlawful storage or to the disposal of waste, or if he or she tolerated any of these actions and did not take reasonable countermeasures. The liability is also passed on to the legal successor of the owner if he or she knew about the unlawful storage or disposal of waste, or if he or she could have noticed these storages or disposals if he or she had paid proper attention.

The Industrial Code (*Gewerbeordnung*): The operator and his or her legal successor are liable under the conditions stated above under 4.1. A legal successor is not liable under the Industrial Code if the predecessor has obtained a decision according to Section 83 Paragraph 6 of the Industrial Code.

The Rehabilitation of Historic Contamination Act (*Altlastensanierungsgesetz*): According to Section 18 of the Historic Contamination Act, the liability is passed on to the owner if he or she agreed to the disposal causing the historic contamination or if the owner tolerated such disposal. With respect to the latter, caution is advisable; the courts have yet to determine to what extent "tolerance" of an existing disposal may lead to the liability of the land owner. In practice, it is therefore advisable to report any known disposal without undue delay (note that aside from a land contamination point of view, such as any threats to a water body, should be reported immediately).

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

See above.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes. In this context, note that in principle, there is public funding for the cleanup of historic contamination, in particular, for contamination caused prior to 1 July 1989. In summary, the level of funding depends, *inter alia*, on the applicant's role in causing the historic contamination, the priority level of the cleanup, and whether the applicant is carrying out a business activity. For example, the highest funding is, in general, available to non-profit organizations that had no role whatsoever in the origin of a historic contamination caused prior to 1960 and for which the cleanup is classified to have a priority level 1. However, business operators may be eligible for funding as well, in particular, if their operations are considered to have been in compliance with the relevant regulatory framework (laws and permits) prior to 1 July 1989. The Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology has so far approved 420 funding projects with an investment volume of around EUR 1,439 million and promised funding of around EUR 1,155 million. Of this amount, EUR 1,110 million was committed to historical contaminated land projects. The offer is directed at owners or persons entitled to dispose of a property on which a contaminated site is located as well as at persons obliged to remediate a contaminated site pursuant to the Water Act, the Waste Management Act or the Industrial Code. In addition, municipalities, associations of municipalities, waste associations and federal provinces can always apply for funding, regardless of their legal relationship to the contaminated site.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Local authorities decide during the course of an administrative procedure to what extent cleanup is required. Please note that various threshold values are set forth in a large number of ordinances.

Depending on the nature of the potentially polluted land, these threshold values vary (e.g., lower threshold values generally apply in protected areas). Industrial plants in terms of the Water Act and the Waste Management Act are periodically checked for compliance with the applicable threshold values. Historic contaminations in terms of the Historic Contaminations Act are determined by a risk assessment and disclosed in the Historic Contaminations Register (*Altlastenatlas*).

6. What level of cleanup is required?

Generally, cleanup is required as to reach the level where applicable threshold values are met.

Under the Historic Contaminations Act, the removal of the source of endangerment and the removal of its surroundings is stipulated. Under the Federal Environmental Liability Act, all contaminations of the soil shall be removed as to reach a level at which all significant risk to human health is eliminated. Waters shall be restored to the status prior to the pollution. If the damaged body of water or its functions cannot be restored to its original state prior to the pollution, supplementary remediation must be carried out. The aim of supplementary remediation is to restore the natural resources or their functions to a state that is equivalent to restoring the damaged site to its original state, if necessary at another site. As far as possible and reasonable, this other site should be geographically related to the damaged site, taking into account the interests of the affected population.

7. Are there different provisions relating to the cleanup of water?

Yes. For example, competent authorities can order specific measures under the Water Act to improve the quality of groundwater. Under the Federal Environmental Liability Act, the impaired water bodies shall be remediated by restoring the body to its initial state.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Drinking water:

The Austrian Drinking Water Ordinance currently doesn't contain any thresholds for PFOS, PFOA or other PFAS. However, with the new EU Drinking Water Directive ((EU) 2020/2184)), two new limit values for PFAS have to be implemented in national law: 0.10 µg/l for the "sum of PFAS" and 0.5 µg/l for the "total PFAS" parameter. The "sum of PFAS" means the sum of 20 selected PFAS and the parameter "total PFAS" means the entirety of PFAS, however for "total PFAS" technical guidance has yet to be established by the European Commission. Member States can then decide whether to apply one of the two limit values or both.

Ground Water:

As part of the Water Framework Directive for the protection of bodies of water, an environmental quality standard (EQN) was issued for PFOS. In Austria, the maximum permissible concentration of PFOS in surface water is 36 µg/l, the annual average is 0.00065 µg/l. Furthermore, in October 2022, the European Commission published a draft for a new groundwater quality standard and environmental quality standard.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Willful and unlawful contamination of waters, soil or air can be punished by a criminal sentence of up to five years in prison or a fine. If the offense was committed by negligence, this can be punished by imprisonment of up to two years or a fine. The contamination is punishable only if it alternatively triggers: (i) danger to life or grievous bodily harm to another human or danger to the health of a large number of people; (ii) significant danger to fauna or flora; (iii) long-lasting impairment of the soil, water or air; or (iv) costs for cleanup of more than EUR50,000 or damage to third-party property or protected monuments exceeding this amount.

It is important to know that the mere possibility of causing one of the dangers above is punishable. Further provisions punish other acts considered to be crimes against the environment.

The mere ownership of contaminated land does not constitute a criminal offense; what is punishable is the willful or negligent act of contamination or - under certain circumstances - willful or negligent omission to prohibit a contamination.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

If the failure to clean up causes the possibility of one of the dangers stated above occurring, then yes. Generally, the violation of an order to clean up an instance of contamination is an administrative offense, punishable with fines of up to EUR21,800, and in case of recurrence with fines up to EUR 36,300 (by the Historic Contaminations Act). According to the Waste Management Act a fine up to EUR 41.200 can be imposed.

11. Can the legal entity be held liable?

Yes. According to the Federal Environmental Liability Act, operator means any natural or legal person under private or public law who carries out or determines the professional activity - alone or with the help of third parties.

12. What authority enforces cleanup?

Depending on the applicable law, the respective district administrative authority will enforce a cleanup in the vast majority of cases. As soon as a site is registered to contain Historic Contamination under the Historic Contamination Act, the provincial governor (*Landeshauptmann*) is the competent authority.

13. Are there any defenses?

A variety of defenses may be available, depending on the nature of the specific case. Possible defenses range, from appeals against an order to clean up a site to the competent administrative court, to the mitigation of regress to the provincial government, if a contamination has been previously decontaminated under the Rehabilitation of Historic Contamination Act. Furthermore, the time at which a contamination occurred may have a significant impact on the defense.

14. Can a third party/private party enforce cleanup?

Yes. Pursuant to Section 364 of the Civil Code (*Allgemeines Bürgerliches Gesetzbuch*), third parties may obtain orders prohibiting detrimental effects resulting from sewerage, smoke, gas, heat, odors, noises, vibrations or poisons (broad terms that refer to a group of emissions) emitted by a neighboring property. Moreover, under the Federal Environmental Liability Act, aggrieved parties have the right to initiate proceedings to clean up contaminations and have the right to be heard in such proceedings.

Besides this, claims for removal and compensation of damages may be asserted if the corresponding prerequisites are fulfilled (according to the Civil Code, this may also proceed pursuant to the individual material laws). With regard to emissions by permitted and lawfully operated industrial plants, the rights of third parties are somewhat restricted.

15. Can third parties claim damages?

Yes. Depending on the applicable law, the responsible person may also be liable regardless of his or her fault. Note that under certain circumstances, third parties may also claim damages from the owner of a site, even if the damage was caused by the tenant or a legal predecessor.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

Yes, pursuant to the Austrian Civil Code *(Allgemeines Bürgerliches Gesetzbuch)* the seller has an obligation to provide information to the seller. In the event of a breach of the duty to provide information, the buyer can assert warranty, the right to contest errors or claim for damages.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

There is no obligation to register the declaration in the land register. However, if environmental damage has occurred, the operator must immediately inform the competent authority of all significant aspects of the situation. However, a register of suspected areas is kept by the Federal Environment Agency and contains those deposits and old sites notified by the state governors for which the suspicion of a significant environmental hazard is justified.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No. Although caution is advisable, if the seller suspects that a property is possibly contaminated, the Supreme Court tends to interpret a seller's obligation to give information rather broadly and therefore, in many cases, rule in favor of the purchaser of a property. The seller, who wants to rule out being held liable for unknown contamination must insist on a comprehensive waiver of warranty. If he fails to do so, he must pay for any decontamination. In general the contamination-freeness is usually seen as a required characteristic of a property, when an undeveloped property is sold for the purpose of building a house. The seller is liable under warranty law, unless there is no agreement to an exclusion from the warranty.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

No, There is no automatic transfer of the obligation. As in point 4.2. explained in more detail, under certain circumstances the legal successor of the property owner can be held responsible if the primary obligor cannot be held responsible. According to the Waste Management Act, legal successors of the property owner can be held liable if they knew or should have known about the storage or deposit if they exercised due attention.

19.2. Contractually?

No. It may be possible to pass on the costs for cleanup, depending on the nature of the case. The obligations under public law, however, cannot be passed on under any circumstances and the authorities are not bound by contractual agreements between the parties.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

In the course of the due diligence process, the kind of industrial activities carried out on the property should be investigated. A potential purchaser is also well advised to check for Historic Contaminations in the Historic Contaminations Register and gather further information from the competent authorities.

Due to frequent changes to laws regarding land contamination and environmental protection as such, it is highly advisable to consult a local attorney before purchasing land.

Belgium

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Flemish Region: In the Flemish Region of Belgium, land contamination has, since 1995, been specifically governed by the Decree on soil decontamination of 22 February 1995 and its implementing regulation of 5 March 1996 (*Vlaams reglement inzake bodemsanering en bodembescherming* or VLAREBO). As of 1 June 2008, this legislation has been replaced by the Decree of the Flemish Parliament of 27 October 2006, relating to soil cleanup and soil protection ("Flemish Soil Decree") and by a new version of the implementing regulation VLAREBO, adopted by the Flemish government on 14 December 2007. By Decree of the Flemish Parliament of 25 May 2012, the European Industrial Emissions Directive (2010/75/EU) was implemented, introducing a new obligation for operators of Integrated Pollution and Prevention Control (IPPC) installations to prepare a soil situation report ('S-report'). The Flemish Parliament adopted several changes to the Soil Decree (Decree of 19 March 2014, validated by the Flemish government on 28 March 2014), which became effective on 1 January 2015.

Walloon Region: In the Walloon Region of Belgium, land contamination is governed by the Decree of 1 March 2018, regarding soil management ("Walloon Soil Decree"). The Soil Decree replaces a former Decree of 5 December 2008.

With the new Walloon Soil Decree, a decade of inactivity in Walloon soil legislation came to an end. The former decree of 5 December 2008 largely remained a dead letter. For example, the soil database was never created, and the provision listing the events giving rise to the execution of soil obligations never entered into force.

The new Decree of 1 March 2018 entered into force on 1 January 2019.

The Walloon Soil Decree is implemented by several decrees of the Walloon Government, including the Decree of the Walloon Government of 27 September 2018 establishing the list of risk installations and activities.

Among the provisions implemented by the new texts, the Soil-State Database (BDES) provides all citizens access to the administration's data regarding the state of soil in Wallonia. It also makes it possible to issue official extracts during certain administrative processes.

Furthermore, land contamination in the Walloon Region also remains regulated through the following regulations and decrees:

- Specific and limited zoning regulations pertaining to the cleaning up of former industrial sites The (new) Decree of 9 March 2023 relating to waste and circular use of materials
- The regulation of 7 July 2005 relating to the remediation of gas stations
- The Decree of 11 March 1999, relating to environmental permits

In view of their limited importance, we shall not further comment on all these specific regulations. Our answer to the following questions will focus mainly on the Soil Decree.

Brussels Region: The Brussels Region approved soil cleanup legislation in 2004, laid down in the Ordinance of 13 May 2004, on the management of contaminated land. Together with the most important implementing provisions (relating to the list of risk activities, soil cleanup standards and

public access to the inventory of contaminated land or land for which there is a strong indication of contamination) laid down in some decrees of the Brussels government, this ordinance became fully effective on 13 January 2005.

The ordinance had important consequences for the transfer of real rights on land, as well as for the transfer of activities requiring an environmental permit, and for the starting up and closing down of risk facilities. The ordinance, however, mainly focused on the management (control) of contaminated land. This means that decontamination is not always required. Other solutions such as delimitation of the contamination and the limitation of the use of contaminated land will also have – and previously had – to be investigated.

The Brussels government prepared an important revision of the Ordinance, which resulted in the adoption by the Brussels Parliament of the new Ordinance of 5 March 2009, on the management and cleanup of polluted soils ("Soil Ordinance"), last amended by Ordinance of 23 June 2017. The Soil Ordinance has replaced the former Ordinance of 2004 as from 1 January 2010. Important executive regulations relating to the list of risk activities and cleanup and intervention standards were adopted on 17 December 2009 (modified by governmental decree of 16 July 2015). By implementing the regulation of 8 July 2010, the government laid down the contents of the risk management proposal, the cleanup proposal and the limited proposal. The "soil certificate" is currently regulated by an executive regulation of 16 February 2017. By the regulation of 15 December 2011, the government has adopted provisions relating to the acknowledgement of soil cleanup experts and the registration of soil cleanup contractors. An executive regulation of 2 March 2014, lays down the conditions for granting subsidies for the execution of soil investigations and the treatment of so-called orphan pollution.

2. Is there a definition of contaminated land?

Flemish Region: Soil contamination is defined as the presence – as a result of human activities – of substances or organisms on or in the soil or the buildings and structures erected on it, which adversely affect or may affect the quality of the soil, either directly or indirectly.

For contamination that occurred prior to 29 October 1995 (historical contamination), decontamination will be required only when clear indications of severe contamination exist. For contamination that has been occurring since 29 October 1995 (new contamination), decontamination will be required if the contamination exceeds the soil remediation standards (as laid down in the annexes of VLAREBO).

For mixed contamination (i.e., contamination that has occurred in part before 29 October 1995, and in part as from the same date) decontamination is required if the contamination exceeds the soil remediation standards (in the event the mixed pollution is predominantly new) or when clear indications of severe contamination exist (in the event the mixed pollution is predominantly historic).

Severe soil contamination is that which constitutes or may constitute a risk of adversely affecting man or the environment.

When evaluating the severity of soil contamination, the following factors shall be taken into account:

(a) The characteristics, functions, uses and properties of the soil

(b) The nature and concentration of the contaminating factors

(c) The possibility of dispersion of the contaminating factors

As from 1 January 2015, the new concept of "mingled pollution" was introduced, meaning a pollution for which several persons can qualify as one of the persons who are responsible for carrying out soil cleanup. A mingled pollution will be qualified as such by the Flemish Public Waste Company (OVAM) and may cover a historical, new or mixed pollution. The different persons responsible for cleaning up an instance of mingled pollution will have to carry out soil investigation and further measures jointly

and they will have to bear the costs in accordance with a formula. The entry into force of the new procedure for mingled pollution requires further implementing regulations by the Flemish government, such as the formula on how to divide costs.

Walloon Region: Soil contamination is defined as the presence on or in the soil of pollutants, i.e. products, substances, waste products, chemical elements or organisms originating from human activities that may influence, directly or indirectly, the quality of the soil in a negative manner.

For contamination that occurred prior to 30 April 2007 (historical contamination), decontamination will be required only if:

(a) the descriptive soil investigation reveals that the threshold values are exceeded for at least one parameter and the background values for those parameters are lower than the measured concentrations; and

(b) the decision of the competent authority points out that the soil contamination constitutes a serious threat.

In every circumstance, a serious threat to public health and the environment, taking into consideration the characteristics of the land, has to be addressed.

For contamination that has been occurring since 30 April 2007 (new contamination), the pollution has to surpass the mentioned threshold values, taking into consideration the background values.

Brussels Region: Soil contamination is defined as any soil contamination that has or can have a strong negative effect on human health or could influence the ecosystem, the chemical or quantitative nature, or the ecological potential of water bodies in a severely negative manner, since substances, preparations, organisms or microorganisms have been brought onto the surface or into the ground. No distinction is made between historical and new pollution (contrary to legislation passed in the Flemish and Walloon Regions).

The Soil Ordinance differentiates between three kinds of pollution:

- "One-off pollution" – Pollution exclusively caused by the current operator of the ground
- "Mixed pollution" – Pollution caused by different persons, not exclusively by the current operator of the ground, and without the possibility of determining what part of the pollution was caused by the current operator
- "Orphan pollution" – Pollution not caused by the current operator of the ground

If an exploratory soil investigation reveals a contamination of soil and/or groundwater that exceeds the intervention standards or the cleanup standards, as well as an increase of the contamination, a detailed soil survey has to be carried out.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

See answers to Q1.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Flemish Region: For new contamination, the (physical or legal) person primarily responsible for the cleanup is the person who is required to obtain an environmental permit (or who is required to file an

environmental notification) pursuant to the Decree of 5 April 1995 containing general provisions regarding environmental policy, i.e., the operator as defined in Title V of said decree.

If no such activity requiring an environmental permit is performed on the site, or if the operator has been released from the obligation to carry out soil investigation or remediation, the user of the land where the contamination originated is responsible for the cleanup.

In the event there is no operator or user, or if the operator and the user have been released from the obligation to carry out investigation or remediation, the owner of the land where the contamination originated is responsible for the cleanup.

The operator or the user shall not be obliged to carry out a descriptive soil investigation or a soil remediation, respectively, if OVAM, on the basis of the records of the land or the motivated arguments of the operator or the user, considers that the said operator or user complies with the following conditions in a cumulative manner:

(a) He or she has not caused the soil contamination himself or herself.

(b) The soil contamination originated before the time he or she received the land for operation or use.

The owner shall not be obliged to carry out a descriptive soil investigation or soil remediation if OVAM, on the basis of the records of the land or the motivated argument of the owner, considers that he or she complies with the following conditions in a cumulative manner:

(a) He or she has not caused the soil contamination himself or herself.

(b) The soil contamination originated before the time he or she became the owner of the land.

(c) He or she was not aware and was not supposed to be aware of the soil contamination at the moment he or she became the owner of the land.

With regard to historical contamination, the primarily responsible person for the cleanup is the same as for new contamination, but the triggering thresholds are slightly different for the owner. The owner who acquired contaminated land before 1 January 1993, even though he or she was or should have been aware of the soil contamination, shall not be obliged to carry out a descriptive soil investigation nor the soil remediation if OVAM, on the basis of the records of the land or the motivated argument of the owner, considers that he or she did not cause the contamination himself or herself and that, since its acquisition, he or she has only used the land for private purposes.

Before 1 January 2015, the person responsible for the soil cleanup was responsible for the cleanup of the whole contamination, that is, including the portion of the pollution that was caused before he or she became the operator, the user or the owner of the land (meaning that the person legally responsible for the cleanup could not be exempted partially). Since 1 January 2015, the person responsible for the soil cleanup also has the chance to obtain an exemption from cleanup obligation for a portion of the contamination, such as for the contamination that was caused before he or she became the operator, user or owner of the land.

Walloon Region: The execution of soil obligations, including the execution of an exploratory soil study and, if necessary, the conducting of a descriptive soil study and further remediation or other measures, is imposed by the Soil Decree in the following instances:

- in response to a building permit, a single permit or an integrated permit for certain acts, on land marked as polluted or potentially polluted in the soil database. The Soil Database is accessible to all;

- upon the termination of an environmental permit, a once-only permit or an integrated permit for an installation or activity entailing a risk for the soil;
- in case of environmental damage impacting the soil; and
- after a decision by the administration in case of serious indications of soil pollution.

Transfers of land are not affected

The person who wants to apply the provisions of the Walloon Soil Decree also has the obligation to perform decontamination.

In the first instance, the decontamination has to be started by the (presumed) person of the pollution or the one that left any waste. If that person cannot be identified or in the event it is very difficult to identify the polluter, the operator will have to perform cleanup. This is also the case when the author is no longer liable or cannot provide sufficient financial securities.

Last but not least, the owner, the ground lessee, the usufructuary or the lessee, as designated by the competent authority, would need to take up cleanup obligations.

Brussels Region: Soil contamination is determined by carrying out an exploratory soil survey, which is required in the following situations:

- An event or accident, contaminating the soil or groundwater
- The discovery by chance of contamination during excavation works
- A transfer of ownership rights to land (or transfer of any real rights to the land) where a risk activity was or is carried out
- A transfer of an environmental permit (merger, division, acquisition of the facility with change of operator) for a risky activity
- Environmental permit application for an activity on certain land considered to be at risk
- Building permit application for certain works on land pertaining to certain soil categories
- The prolongation of an environmental permit for risky activities
- Periodic survey obligation for risky activities
- Closing down a risk activity
- Bankruptcy of an operator of risk activities or an owner of risk grounds

Not every "transfer of risk land" is subjected to the obligation to carry out an exploratory soil survey. This obligation is restricted to transfers of ownership as such and transfers of real rights on land, as well as transfers of environmental permits (see also under 14.).

The obligation to carry out an exploratory soil survey is imposed on the holder of a real right on the land or on the operator in the event of a transfer or an extension of the validity period of an environmental permit.

If an accident causes pollution, the person causing that accident will be responsible for carrying out an exploratory soil investigation. If that person cannot be identified, the operator remains responsible for the cleanup. The same persons responsible for the exploratory investigation will also be obliged to carry out a detailed soil survey (if required) and certain cleanup measures (if required).

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

Flemish Region: The primary responsibility for a cleanup can be different from the ultimate financial liability. The primary responsibility for a cleanup may not necessarily rest with the polluter. In such a case, the person who has performed the cleanup has a recourse against the polluter.

The ultimate financial liability is described as follows:

- For new contamination, the polluter (the person who has caused the soil contamination) shall be strictly liable for the costs made pursuant to the Soil Decree, governing descriptive soil investigations, soil remediation and any damage due to such measures, including use restrictions or precautionary measures. However, if the polluting source causing the soil contamination originates from an operation that requires an environmental permit, the operator of this facility shall be held liable.
- For historical contamination, general torts law shall apply. Compensation from the polluter can be obtained only if one can demonstrate fault, damages and a causal relationship between fault and damages.

Walloon Region: See 4.1. If the polluter cannot be found (or is not liable, or even not solvent), the operator will be obliged to clean up the contaminated land.

With regard to last-resort measures, when there is no operator, the responsibility for cleanup is passed to the owner, the ground lessee, the usufructuary or the lessee of the land.

In accordance with the general torts law, compensation from the polluter can be obtained only if one can demonstrate fault, damages and a causal relationship between fault and damages.

Both historical and new contamination are governed by these principles.

Brussels Region: See 4.1. If the polluter cannot be identified, the operator remains responsible for the soil investigation and possible further cleanup measures; if there is no operator, the obligations rest with the owner of the real rights on the land. Furthermore, in accordance with the general torts law, compensation from the polluter can be obtained only if one can demonstrate fault, damages and a causal relationship between fault and damages.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

See answers to Question 4.1.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

See answers to Question 4.1.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Flemish Region: With regard to land with historical soil contamination, a descriptive soil investigation shall be carried out when clear indications of severe soil contamination exist.Soil remediation shall be carried out when a descriptive soil investigation indicates the presence of serious soil contamination. OVAM shall identify land with severe historical contamination, where soil remediation must be carried out with high priority.

A serious soil contamination is that which constitutes or may constitute a risk of adversely affecting people or the environment.

When evaluating the severity of the soil contamination, the following factors shall be taken into account:

(a) The characteristics, functions, uses and properties of the soil

(b) The nature and concentration of contaminating factors

(c) The possibility of dispersion of contaminating factors

For new contaminations, remediation shall be required if the soil remediation standards (as defined in Annex 4 of the implementing decree VLAREBO) are exceeded. These soil remediation standards correspond to a level of soil contamination that entails considerably harmful effects on people or the environment, taking into account the characteristics of the soil and the functions it fulfils. If there are clear indications that the soil contamination exceeds or threatens to exceed soil remediation standards, a descriptive soil investigation shall be carried out immediately. If the descriptive soil investigation shows that the soil remediation standards have been exceeded, soil remediation shall be initiated without delay. If, due to its special nature, the soil contamination cannot be verified against soil remediation standards, a descriptive soil investigation shall be carried out when clear indications of severe soil contamination exist and soil remediation shall be carried out when the descriptive soil investigation indicates the presence of severe soil contamination.

Walloon Region: For contamination that occurred prior to 30 April 2007 (historical contamination), decontamination will only be required if the descriptive soil investigation reveals that the threshold values are exceeded for at least one parameter and the background values for those parameters are lower than the measured concentrations, and the decision of the competent authority points out that the soil contamination constitutes a serious threat.

For contamination that has been occurring since 30 April 2007 (new contamination), pollution has to surpass the mentioned threshold values, taking into consideration the background values.

The threshold values which, when exceeded, give rise to the obligation to conduct a descriptive soil study were increased for the commercial, industrial and recreational categories of use under the new Soil Decree that came into force on 1 January 2019. The execution of a descriptive soil study is therefore required in fewer cases than under the former decree.

The threshold values for the other categories of use have remained unchanged.

The new Soil Decree has also eased the values for decontamination.

Under the former Soil Decree, new soil pollution had to be remediated up to the point where the reference values were obtained. These reference values correspond to concentrations of pollutants that can be expected in the soil without human interference. For new pollution, the new Soil Decree only demands remediation to 80% of the threshold value, or to the soil concentration (reference value) if this is higher than 80% of the threshold value.

For historic pollution, which is pollution caused by an event prior to 30 April 2007, the former Soil Decree demanded remediation to a value set by the administration, which would take account of the reference values and which would at least prevent a serious threat to public health and the environment. Under the new Soil Decree, the referral to the reference values has been omitted. Henceforth, the remediation must only prevent a serious threat to public health and the environment.

By no longer demanding that remediation should achieve restoration of the original state, the legislator wanted to avoid remediation representing such a high cost that this would lead to a limitation on economic development within the Walloon Region.

Brussels Region: If an exploratory soil investigation reveals a contamination of soil and/or groundwater exceeding the intervention standards or exceeding the cleanup standards, as well as an increase of the contamination, a detailed soil survey has to be carried out.

If a detailed soil survey reveals the existence of a one-off pollution, a cleanup proposal and soil cleanup works with respect to the contamination have to be carried out on behalf of the following people:

- The operator who has caused the pollution
- The owner of rights *in rem* who has caused the pollution
- The identified author who has caused the pollution

In the event of mixed pollution (i.e., pollution caused by different persons, not exclusively by the current operator, and without the possibility of determining what part of the pollution is caused by the current operator of the land) or in the event of an orphan pollution (i.e., pollution that is not caused by the current operator of the land), there is no obligation to carry out remediation measures as such. The operator will be obliged to carry out a risk study and to propose and implement risk management measures.

Only in the event of one-off pollution not completely caused before 1 January 1993, and mixed pollution, all authors thereof should know there is a real cleanup obligation. The obligation to decontaminate the land is imposed on the operator and the owners of rights *in rem* who have caused this pollution, as well as on the person who has been causing the pollution since 20 January 2005.

6. What level of cleanup is required?

Flemish Region: In cases of historical soil contamination, soil remediation shall be aimed at avoiding any potential risk (posed by contaminated land), effectively or potentially constituting a risk of adversely affecting people or the environment by using the best available techniques not entailing excessive costs (BATNEEC) principle. If the land, in the framework of a provisional draft of a land-use or implementation plan, is assigned a different use, soil remediation shall be aimed at avoiding any potential risk (posed by contaminated land) effectively or potentially constituting a risk of adversely affecting people or the environment within this future use. If it is not possible to obtain the targeted level of soil quality as mentioned by using the BATNEEC principle, land use or town planning restrictions may be imposed if necessary.

In the event of new soil contamination, soil remediation shall be aimed at achieving the target values for the desired level of soil quality (Annex II of VLAREBO). If, due to the nature of the soil contamination or the characteristics of the contaminated land, it proves impossible to achieve the target values for soil quality by using the BATNEEC principle, soil remediation shall at least be aimed at obtaining better soil quality than that specified by the applicable soil remediation standards. If the land, in the framework of a provisional draft of a land-use or implementation plan, is assigned a use to which stricter soil remediation standards apply, the stricter soil remediation standards shall be taken as the remediation objective. If, due to the nature of the soil contamination or the contaminated land, it is not possible to obtain the soil quality mentioned above by using the BATNEEC principle, soil remediation shall be aimed at avoiding any potential risk (posed by contaminated land) effectively or potentially constituting a risk of adversely affecting people or the environment by using the BATNEEC principle.

If it is not possible to obtain the soil quality as mentioned, inclusively by using the BATNEEC principle, restrictions with respect to the use of the land may be imposed if necessary. If, due to its special nature, the soil contamination cannot be verified against the targets for soil quality, soil remediation shall be aimed at avoiding any potential risk (posed by contaminated land) effectively or potentially constituting a risk of adversely affecting people or the environment by using the BATNEEC principle.

The selection of the BATNEEC principle is independent of the financial capacity of the person who is under the obligation to carry out the remediation.

Walloon Region: The cleanup of new contamination is aimed at the recovery of the soil for contaminating substances that exceed the reference standards with regard to the level of the reference standards measured by the background concentrations or to the level that approaches those standards as close as possible through best available techniques.

An exemption can be granted in the soil inspection certificate provided by the competent authority (with particular limit values).

The cleanup of historical contamination is aimed at the recovery of the soil for contaminating substances that exceed the limit values, to the level established by the competent authority. That level should reach the reference standards and at least make it possible to remove any serious threat to human health and the environment, taking into account the characteristics of the soil, particularly: relating to the presence of a building, an installation or a regular activity; how long the contamination has taken place; the possibility that the contamination will disappear (by way of natural attenuation); the existence of a project for which an environmental permit and/or building permit is applied; and the future condition of the land.

Brussels Region: The aim of a soil cleanup will depend on the type of pollution. In the event of an orphan pollution or a mixed pollution, the risks posed by the pollution should not severely affect public health and the environment if the risk values are exceeded. This will result in the preparation of a risk management proposal and the implementation of risk management measures, or possibly, the execution of a cleanup proposal and cleanup measures.

A cleanup operation in the event of one-off pollution will aim to comply with certain cleanup standards. In the event of an increase in pollution levels, a cleanup may also be intended to curb such increase.

7. Are there different provisions relating to the cleanup of water?

Flemish Region: The Flemish Soil Decree also applies to groundwater (and to water bottoms). Surface water does not fall within the scope of the Soil Decree. Surface water pollution is governed by the Decree on Integrated Water Policy ('Water Code') and its implementing decrees, and by the regulation of the Flemish government pertaining to environmental conditions (VLAREM II).

Walloon Region: The Walloon Soil Decree also applies to groundwater. Surface water does not fall under the scope of the decree. Surface water pollution is governed by the Decree of 7 October 1985, relating to the protection of surface water against pollution, and by the Decree of 11 March 1999, relating to environmental permits and its implementing decrees.

Brussels Region: The Soil Ordinance also applies to groundwater. Surface water does not fall within the scope of the ordinance. Surface water pollution is governed by the law of 26 March 1971, on the protection of surface water and its implementing decrees, and by the Ordinance of 30 July 1992, relating to environmental permits and its implementing decrees.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Due to the complex properties of PFAS, guidelines, in the three regions of Belgium, are in full evolution and policy regarding PFAS is not a simple exercise. If PFAS was or is used on site, in Flanders there is an obligation to investigate soil and groundwater in the context of exploratory soil investigations. The files are thoroughly checked by the Public Flemish Waste Company (OVAM). Even for files where no periodic exploratory soil investigation is required, it is advised to start an exploratory investigation now, especially if soil remediation is already underway on the site. Even if drainage or earth moving is carried out for infrastructure works, for example, it is recommended checking the groundwater before discharging, and also analyzing PFAS in the technical report.

By decision of 7 Juli 2023, the Flemish Government has established the assessment values for PFAS in a legally binding, temporary framework *for the use of PFAS-containing soil materials* and for the *implementation of the soil remediation criterion*. The OVAM previously published assessment values for PFAS because standards could not yet be determined due to rapidly changing scientific insights. For the same reasons, no 'standards' are now laid down in the Vlarebo, but the Flemish Government chooses to record the values in a decision that must provide sufficient clarity and legal certainty for professional groups such as soil remediation experts and soil management organizations. Thanks to this decision, that will (probably) enter into force on the 1st of September 2024, citizens benefit from the guarantee that no free use of excavated soil materials can take place above the test values from the temporary action framework. The decision further provides that the action framework will be evaluated annually and possibly adjusted as long as no standards can yet be established.

In the Brussels Region, Brussels Environment has taken the initiative to draw up and publish a Code of Good Practice for the research and treatment of PFAS in soil and groundwater, intended for soil pollution experts. This code has been in force since 24 January 2022 and sets out the practical modalities for research into PFAS during soil surveys. The content of the code is constantly evolving and can be adjusted based on newly acquired knowledge. Thanks to this code, Brussels Environment can ensure that PFAS are integrated into soil surveys, where relevant, as well as to monitor the management of any contaminants found.

Note: The limits regarding presence of PFAS in *drinking water* is regulated by the EU in the Directive 2020/2148. A proposal for a European ban on PFAS was published on 7 February 2023, to prevent pollution of the living environment. The European Commission is expected to present a final proposal in 2025 for decision-making by member states.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Flemish Region: To contaminate land is not a specific offense under the Soil Decree. However, contaminating land may well constitute a criminal offense under waste regulations or because it may constitute a breach of the operator's environmental permit conditions. Since 1 May 2009, the criminal provisions for environmental crimes have been included in title XV of the Decree of 5 April 1995, containing the General Provisions on Environmental Policy. Article 16.6.2.§1 of this decree mentions that any person who, contrary to the legal provisions or contrary to a permit, directly or indirectly pollutes water, soil or atmosphere will be punished with imprisonment of one month to five years and/or imposed a criminal fine of EUR100 (to be multiplied by 8) to EUR500,000 (also to be multiplied by 8).

Walloon Region: To contaminate land is not a specific offense. However, contaminating land may well constitute a criminal offense under waste regulations or because it may constitute a breach of the operator's environmental permit conditions.

Brussels Region: To contaminate land is not a specific offense. However, contaminating land may well constitute a criminal offense under waste regulations or because it may constitute a breach of the operator's environmental permit conditions.

In the Flemish, Walloon and Brussels Regions, it is not a criminal offense to own contaminated land.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Flemish Region: Noncompliance with the cleanup requirement is no longer considered a criminal offense. Since 1 May 2009, violations of the provisions of the Flemish Soil Decree have been regarded as environmental infringements that are sanctioned in an administrative way under Title XVI

of the Decree of 5 April 1995, containing the General Provisions on Environmental Policy. Annexes III and XII of the regulation of the Flemish government of 12 December 2008, implementing Title XVI of the Decree of 5 April 19995, contain a list of the infringements to soil cleanup legislation that are regarded as environmental infringements and for which violators can be sanctioned with an administrative fine of up to EUR 50,000 (to be multiplied by 8).

Walloon Region: Noncompliance with the investigation and cleanup requirements under the Soil Decree and with the information obligations under the Walloon Soil Decree is considered a criminal offense of the second category under Book I of the Walloon Environmental Code. Criminal offenders with regard to the second category are sanctioned with imprisonment of from eight day s to three years and/or imposed a criminal fine of a minimum of EUR 100 and a maximum of EUR1 million (multiplied by 8).

Brussels Region: Article 75 of the Soil Ordinance lists persons who can be punished with imprisonment of from one month to five years and/or imposed a criminal fine of EUR 100 to EUR 10 million (to be multiplied by 8):

- People who carry out soil investigations without the required certification or registration
- Soil cleanup experts or contractors who do not comply with the conditions of the certification or registration
- Transferors of a right *in rem* or an environmental permit who did not inform the acquirer or did not deliver the soil certificate
- People who do not fulfil the obligation to carry out an exploratory soil survey, a detailed soil survey or a risk survey

11. Can the legal entity be held liable?

Yes, legal entities may incur both administrative and/or criminal sanctions, under the respective regional soil legislations (as explained under 10. above).

12. What authority enforces cleanup?

Flemish Region: OVAM is the governing and enforcing authority with regard to soil cleanup (www.ovam.be). OVAM can also carry out the cleanup on behalf of the responsible entity and have the costs refunded.

Walloon Region: The governing and enforcing authority with regard to soil cleanup is the Walloon environmental administration, *Direction de la Protection des Sols* or DPS. The competent authority can also impose financial guarantees on the responsible party, as well as carry out the cleanup on behalf of the responsible person and have the costs refunded in urgent cases.

Brussels Region: The governing and enforcing authority with regard to soil cleanup is Environment Brussels (https://leefmilieu.brussels), formerly known as the Brussels Institute for Environmental Management or BIM. Environment Brussels can also carry out a cleanup itself on behalf of the responsible person and have the costs refunded.

13. Are there any defenses?

Flemish Region: When requested to perform a descriptive soil survey, the operator or the user may argue that he or she does not need to perform a descriptive soil survey if he or she can prove the following in a cumulative manner:

(a) He or she has not caused the soil contamination himself or herself.

(b) The soil contamination originated before the time he or she received the land for operation or use.

The owner shall not be obliged to carry out the descriptive soil investigation or the soil remediation if OVAM, on the basis of the records of the land or the motivated argument of the owner, considers that he or she complies with the following conditions in a cumulative manner:

(a) He or she has not caused the soil contamination himself or herself.

(b) The soil contamination originated before the time he or she became the owner of the land.

(c) He or she was not aware and was not supposed to be aware of the soil contamination at the moment he or she became the owner of the land.

In the event of historical contamination, the owner who acquired contaminated land before 1 January 1993, even though he or she was or should have been aware of the soil contamination, shall not be obliged to carry out a descriptive soil investigation or soil remediation if OVAM, on the basis of the records of the land or the motivated argument of the owner, considers that he or she did not cause the contamination himself or herself and that, since its acquisition, he or she has used the land only for private purposes.

Since 1 January 2015, the person responsible for the soil cleanup also has the option to obtain exemption from cleanup obligations for a portion of the contamination, such as for contamination that was caused before he or she became the operator, user or owner of the land.

Walloon Region: The responsible person does not need to perform a cleanup if he or she proves that a third person has engaged himself or herself formally, unconditionally and irrevocably to decontaminate the concerned polluted land. A special act of the competent authority is required, as well as financial securities.

For the author of the pollution or the operator, three possibilities are provided for:

(a) The soil pollution or the waste left is attributed to a third party, notwithstanding appropriate security measures.

(b) A document has been given by the competent authority confirming that decontamination has been executed well.

(c) The pollution does not constitute a serious threat, taking into consideration the scientific and technical knowledge at the moment that the pollution has been caused.

For the owner, ground lessee, and usufructuary, there are four possibilities:

(a) The pollution is due to a migration from outside.

(b) A soil control certificate has been given with regard to the land.

(c) A document has been given by the competent authority confirming that decontamination has been well executed.

(d) The pollution does not present any serious threat, taking into consideration the scientific and technical knowledge at the moment that the pollution occurred.

Brussels Region: The Soil Ordinance mentions only one possibility to obtain an exemption from cleanup obligations (contrary to the legislation passed in the Flemish Region and the Walloon Region), that is, in the event of voluntary takeover of the cleanup obligation by a third party.

14. Can a third party/private party enforce cleanup?

No, in all three regions.

15. Can third parties claim damages?

Flemish Region: The person who is responsible for the cleanup of new contamination is strictly liable to third parties for damage resulting from the remediation or from the restrictive measures imposed by OVAM.

Damages claimed with regard to the pollution itself are governed by general torts law. Compensation for damages will, in particular, require evidence of fault, damages and a causal link between the two or, in the event of damage to a neighboring parcel of land, evidence that the normal balance of inconvenience between neighboring parcels has been breached.

Walloon Region: The Walloon Soil Decree does not contain specific provisions relating to liability for soil cleanup costs. The definition of persons who are obliged to carry out soil investigation and/or cleanup does not restrict the application of general civil torts law.

Damages claimed with regard to the pollution itself remain governed by general torts law. Compensation for damages will, in particular, require evidence of fault, damages and a causal link between the two or, in the event of damage to a neighboring parcel of land, evidence that the normal balance of inconvenience between neighboring parcels has been breached.

Brussels Region: The liability regime under the Soil Ordinance is similar to the one applicable in the Flemish Region. In both regions, strict liability is introduced and is ascribed to the author of the pollution for the costs of soil investigations and cleanup and other measures, including the damage caused by these measures. In the event soil pollution is caused by a facility that is required to obtain an environmental permit or is subject to a notification obligation, the operator of the facility is liable for these costs and damages.

Damages claimed with regard to the pollution itself remain governed by general torts law. Compensation for damages will, in particular, require evidence of fault, damages and a causal link between the two or, in the event of damage to a neighboring parcel of land, evidence that the normal balance of inconvenience between neighboring parcels has been breached.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

Flemish Region: Land on which a risk activity or installation is/was located (high-risk land) can only be transferred after the owner has obtained a report of an exploratory soil survey performed by a recognized soil expert and submitted this report to OVAM. The contract of sale must refer to such exploratory soil survey report (and the assessment/decision of OVAM). For the transfer of non-risk land, the Soil Decree requires the owner of land to apply for a soil certificate from OVAM prior to entering into a transaction entailing the transfer of the land and to inform the prospective buyer of the contents of the soil certificate that need to be cited in the private and notary transfer deed. *See also, 18 hereafter*.

Further and in general under civil law / contracts law, a seller may be liable if he or she did not inform the (potential) purchaser about issues with respect to (potential) contamination. This has to be assessed on a case-by-case basis.

Walloon Region: Prior to a transfer of land – and, incidentally, prior to a transfer of an environmental permit – a soil certificate or "a certified extract of the soil database" must be applied for and submitted

to the acquirer. This soil attestation may not be older than one year. The content of the soil attestation must also be copied in the private agreement or in the authentic deed. Further and in general under civil law / contracts law, a seller may be liable if he or she did not inform the (potential) purchaser about issues with respect to (potential) contamination. This has to be assessed on a case-by-case basis. *See also 18. hereafter.*

Brussels Region: The transfer of a right in rem on land requires the transferor to request a soil certificate for the relevant plot or plots from Environment Brussels and to provide these certificates [2 to the acquirer before the conclusion of the deed of the agreement. The private agreement and the authentic deed contain the statement by the acquirer that he has been informed of the contents of the soil certificate or soil certificates and the transferor's statement that he does not have additional information that could change the content of the soil certificates issued by Environment Brussels. Further and in general under civil law / contracts law, a seller may be liable if he or she did not inform the (potential) purchaser about issues with respect to (potential) contamination. This has to be assessed on a case-by-case basis.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

The *cadastre* (land registry) does not include a declaration of contaminated land. Information regarding the situation and condition of the soil (e.g. identification as risk land, presence of contamination, soil surveys and/or remediation actions) is however available in the (publicly accessible) soil databases established under the regional soil legislations:

- Flemish Region: Soil Information Register *(Grondeninformatieregister)* of OVAM
- Walloon Region: Soil Condition Database *(Banque de données de l'état des sols)* of the DPS (Department of Soil Protection, SPW)
- Brussels Region: Inventory of the Soil condition *(Inventaris van de bodemtoestand)* of Environment Brussels

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

Flemish Region:

(a) Transfer of (all) land

The Decree requires the owner of land to apply for a soil certificate from OVAM prior to entering into a transaction entailing a transfer of the land and to inform the prospective buyer of the contents of the soil certificate that need to be cited in the private and notary transfer deed.

"Transfer of land" is broadly defined to include: the transfer *inter vivos* of the right of ownership of a piece of land, the establishment *inter vivos* of a right of usufruct, ground lease or a building and planting right of a piece of land, as well as the termination *inter vivos* of such rights established in the aforementioned manner; establishing or terminating a right of concession of a piece of land; the transfer of the right of ownership of a piece of land, the merger of legal persons, the division of legal persons, and actions equivalent to a merger or division in which the legal person(s) whose assets will be transferred is/are owner(s) of land; and the acquisition or transfer of another company's assets and liabilities or of autonomous parts of that company, insofar as this involves a right as mentioned before.

Share transactions do not, however, qualify as a transfer of land under the Flemish Soil Decree. Contrary to the former Soil Remediation Decree (1995), the conclusion and/or termination of lease agreements is no longer considered a transfer of land, as of 1 June 2008. Failure of the transferor to comply with these obligations entitles both the acquirer and OVAM to claim the nullity of the transaction.

The soil certificate reflects the data on the land that OVAM has in its land information register.

(b) Transfer of high-risk land

In addition to the general transferor's duty set forth under (i), another procedure needs to be followed with regard to land on which a risk activity or risk facility is being conducted or operated. These activities and installations are defined and included in the so-called list of hazardous activities of Annex 1 of the VLAREM II (i.e. an implementing regulation of the Integrated Environmental Permit Decree) and in the list of risk activities of Annex 1 of VLAREBO (i.e. the implementing regulation of the Flemish Soil Decree). These lists essentially cover the activities and installations that require an environmental permit and are limited to industrial activities or activities involving dangerous and/or hazardous substances.

Land on which such risk activity or installation is located can, in principle, be transferred only after the owner has observed the following procedure:

- The owner must obtain a report of an exploratory soil survey performed by a recognized expert and submit this report to OVAM. Since 1 January 2015, the owner is no longer obliged to notify the authorities of his or her intention to proceed with the transfer of the land. The obligation to carry out cleanup has become an independent obligation arising from the provisions of the Soil Decree itself and the evaluation of the results of the soil surveys as reflected in the decisions following the declaration of conformity of these surveys and in the land information register.
- OVAM will evaluate the report of exploratory soil survey within 60 days as of receipt. If the evaluation of the report of the exploratory soil survey demonstrates that further measures are required (e.g., clear indications of serious contamination in the event of historical contamination or that which exceeds soil cleanup values in the event of new contamination), the transfer of the land cannot take place before the transferor had carried out a descriptive soil investigation in order to further define and delineate the contamination.

Exoneration from the obligation to remediate:

- With respect to historical contamination

The transferor or his or her agent shall not be obliged to respond to the order to carry out a descriptive soil investigation if OVAM, on the basis of the record of the land or the motivated argument of the transferor or his or her agent, considers that any of the following conditions has been fulfilled:

(a) The soil contamination did not originate from the land to be transferred.

(b) The transferor cumulatively fulfils the conditions mentioned above in the event of transferor is a user.

(c) The transferor cumulatively fulfils the conditions mentioned above, in the event the transferor is an owner.

(d) The operator or user of the land to be transferred does not fulfil the conditions mentioned above, and the entire soil contamination started during the time the operator or the user had the land at his or her disposal for operation or use, respectively, in the event the transferor is an owner.

- With respect to new contamination

The transferor shall not be obliged to respond to the order to carry out a descriptive soil investigation, if OVAM, on the basis of the records of the land or the motivated argument of the transferor or his or her agent, considers that any of the following conditions has been fulfilled:

(a) The soil contamination did not originate from the land to be transferred.

(b) The transferor cumulatively fulfils the conditions mentioned above, in the event the transferor is a user.

(c) The transferor cumulatively fulfils the conditions mentioned above, in the event the transferor is an owner.

(d) The operator or user of the land to be transferred does not fulfil the conditions mentioned above, and the entire soil contamination started during the period the operator or the user had the land at his or her disposal for operation or for use, respectively, in the event the transferor is an owner.

- If, after the report on the descriptive soil investigation has been sent for examination or analysis, the evaluation of OVAM demonstrates that soil remediation standards (in the event of new contamination) have been exceeded, or that the contamination is not to be considered severe (in the event of historical contamination), the transfer of the land may not take place until the transferor:

  (i) has drawn up a soil remediation project or a limited soil remediation project and a certificate of conformity of this project has been delivered;

  (ii) has committed vis-à-vis, OVAM to carry out another soil remediation and possible aftercare activities; and

  (iii) has provided financial securities as a guarantee in compliance with the undertaking mentioned in (ii).

Remark: Accelerated transfer procedure

The Soil Decree also provides for an accelerated transfer procedure. The transferor and the acquiring party shall jointly notify OVAM of their intention to apply the accelerated transfer procedure. With this notification, they are to submit the following documents:

(a) A report of the exploratory and descriptive soil investigation or a report of the descriptive soil investigation if OVAM is not yet in possession of the same

(b) An estimate of the cost for soil remediation and possible aftercare, drawn up by a soil remediation expert.

Within a period of 60 days after receiving all the documents mentioned, OVAM shall decide on the conformity of the soil investigation and the request for the application of the accelerated transfer procedure.

Walloon Region:

In the new Soil Decree, applicable since 1 January 2019, a transfer of land is not included as an event giving rise to soil obligations. The fact that a transfer of land does not result in soil obligations has been deemed necessary to avoid real estate transactions being slowed down or frozen. Obviously this does not prevent the parties from nevertheless conducting an exploratory soil study, in order to be informed about the state of the soil of the plot concerned.

Prior to a transfer of land – and, incidentally, prior to a transfer of an environmental permit – a soil attestation or "a certified extract of the soil database" must be applied for and submitted to the acquirer. This soil attestation may not be older than one year. The content of the soil attestation must also be copied in the private agreement or in the authentic deed.

If the attestation describes the plot of land as polluted or potentially polluted, and provided that the administration has imposed soil measures on the transferor, the agreement or act must indicate whether or not the acquirer of the plot of land will take over the soil obligations. A takeover must be notified to the administration, which can then demand a guarantee for the execution of the soil obligations.

Brussels Region:

(a) Exploratory soil investigation

As already mentioned, soil contamination is established by carrying out an exploratory soil survey, which is required in the following situations:

- An event or accident, contaminating the soil or groundwater
- The discovery by chance of contamination while excavation works are being performed
- Transfer of ownership rights on land (or transfer of any rights *in rem* on land) where a risk activity was or is carried out
- Transfer of the environmental permit (merger, division, acquisition of the facility with change of operator) for a risk activity
- Environmental permit application for an activity on a risk ground
- Building permit application for certain works on land pertaining to certain soil categories
- The prolongation of an environmental permit for risk activities
- Periodic survey obligation for risk activities
- Closing down a risk activity
- Bankruptcy of an operator of risk activities or an owner of risk grounds

However, not every "transfer of a risk ground" is subject to the obligation to carry out an exploratory soil survey. This obligation is restricted to transfers of ownership as such and transfers of rights *in rem* on land, as well as transfers of environmental permits.

The obligation to carry out an exploratory soil survey is imposed on the holder of a right *in rem* on the land or on the operator in the event of transfer of the land or of an environmental permit. In the event of an accident that caused pollution, the person causing that accident will be responsible for carrying out the soil investigation. If that person cannot be identified, the operator remains responsible for the cleanup. The same persons responsible for the exploratory soil investigation will also be obliged to carry out the risk study (if required) and the cleanup measures (if required).

An exploratory soil survey is aimed at defining the existence, the concentration and the expansion of soil and groundwater pollution.

(b) Detailed soil survey and/or risk survey

If an exploratory soil investigation reveals a contamination of soil and/or groundwater that exceeds the intervention standards or that of the cleanup standards, and an increase in the contamination, a detailed soil survey has to be carried out.

If a detailed soil survey reveals the existence of a one-off pollution, a cleanup proposal and soil cleanup works with respect to the contamination have to be carried out on behalf of:

- the operator who has caused the pollution;

- the owner of rights *in rem* who has caused the pollution; and
- the identified author who has caused the pollution.

In the event of mixed pollution (i.e., pollution caused by different persons, not exclusively by the current operator, and without the possibility of determining what part of the pollution is caused by the current operator of the ground), or in the event of orphan pollution (i.e., pollution that is not caused by the current operator of the land), there is no obligation to take cleanup measures as such.

The transferor will be obliged to carry out a risk study and to propose and implement risk management measures (see Chapter IV of the Soil Ordinance: "Risk management").

(c) Treatment of the pollution

If cleanup measures are required, a cleanup proposal has to be elaborated by a certified soil contamination expert and presented to Environment Brussels, within the period Environment Brussels has specified on the basis of previous soil investigations. Subsequently, Environment Brussels will evaluate the soil cleanup proposal and deliver a declaration of conformity or impose changes and amendments to this proposal.

(d) Soil cleanup works

The soil cleanup works are carried out by a soil cleanup contractor under the supervision of a soil contamination expert, within the period specified by Environment Brussels in the declaration of conformity of the soil cleanup project.

Remark 1: As from when can the transfer of land take place?

The transfer of the land cannot take place before the two soil investigations have been conducted, the soil cleanup plan is approved or the risk management plan is executed. If treatment is required (i.e., cleanup or risk management), these measures also have to have been carried out completely before the transfer, if so required.

Remark 2: Accelerated transfer procedure

The Soil Ordinance also provides for an accelerated transfer procedure, which can be applied after the declaration of conformity of the exploratory soil survey. The person who is obliged to carry out the treatment of the soil must undertake the cleanup within the time schedule approved by Environment Brussels. For this purpose, the person who is obliged to carry out the soil cleanup obligations must also provide for financial security.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Flemish Region: The obligations for cleanup under statutory law can be assigned by the transferor to the transferee but OVAM needs to be notified of such assignment.

Walloon Region: The obligations for cleanup under statutory law can be assigned by the responsible person to a third party under the following conditions:

- The third party has declared officially, unconditionally and irrevocably to carry out all obligations resting with the responsible person.
- The competent authority has approved the substitution and the identity of the third party.
- The third party has provided financial security, if required.

Brussels Region: Yes, but binding only upon the parties.

19.2. Contractually?

Only in the Flemish Region did a clear provision exist that the sale could be annulled by a judge on request of the competent authority or the purchaser if the procedure wasn't followed as provided for in the Decree on soil decontamination of 22 February 1995.

The new legislation (Flemish Soil Decree), in force since 1 June 2008, only provides that the contractual clauses not in accordance with the Flemish Soil Decree are not opposable to the Flemish Region and its competent authority. The same is stipulated in the legislation for the Brussels Region.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Flemish Region: When purchasing a company, it is important to review whether the company has sold land (and therefore has been a transferor under the Flemish Soil Decree) prior to the transaction since liabilities under the Flemish Soil Decree (clauses indemnifying the purchaser of the land for hidden defects) may surface long after such purchase.

Also in situations where the Flemish Soil Decree, which entered into force on 1 June 2008, does not apply, such as in some transfers of personal user rights on land (e.g., lease or renting), it is recommended that an environmental audit and/or soil investigation be carried out in this respect, at least if risk activities have been performed or hazardous products have been stored on that land (under the "old" Soil Remediation Decree of 1995, such leases – such as those involving offices in an office building in which some risk activity is performed – triggered the mandatory provisions relating to transfer of risk ground).

Finally, it must be noted that soil contamination with PFAS/PFOA has recently become a very important issue in Flanders as a result of new insights regarding the possible health risks associated with exposure to PFAS/PFOA contaminants. This parameter must now always be considered and examined when a soil survey must be carried out (which was not the case before). In July 2021, OVAM started carrying out exploratory studies specifically focused on PFAS: soil investigations at fire brigade locations (fire training grounds, fire stations and incidents) that were inventoried. Known soil files were re-evaluated.

The Flemish Government has recently established the assessment values for PFAS in a legally binding, temporary framework for the use of PFAS-containing soil materials and for the implementation of the remediation criterion. *See also 8. above with regard to PFAS risk assessment and policy*.

Walloon Region: Also in situations where the Walloon Soil Decree does not yet apply (e.g., Article 21 of the Decree defining the origin of the investigation and cleanup obligations related to transfer of land, transfer of environmental permit, etc., are not yet effective), it is strongly recommended that an environmental audit and/or exploratory soil investigation be carried out in this respect at least if risk activities have been performed or hazardous products have been stocked on that land.

Brussels Region: Also in situations where the Soil Ordinance does not apply, such as in some transfers of personal user rights on land (e.g., lease or renting), it is recommended that an environmental audit be carried out in this respect at least if risk activities have been performed or hazardous products have been stocked on that land.

Czech Republic

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

One of the features of Czech law in the area of environmental protection (including liability for contamination and pollution) is that the regulation is not consolidated in any one piece of legislation, but rather dispersed among various acts and regulations. Accordingly, provisions relating to liability for land contamination can be found in various laws, including but not limited to: Act No. 17/1992 Coll., on Environment; Act No. 114/1992 Coll., on the Protection of Nature and the Environment; Act No. 541/2020 Coll., on Wastes; Act No. 334/1992 Coll., on Protection of Agricultural Soil Fund and its Implementing Regulation of the Ministry of Environment No. 271/2019 Coll.; Act No. 156/1998 Coll., on Fertilizers and its Implementing Regulation of Ministry of Agriculture No. 275/1998 Coll.; Act No. 167/2008 Coll., on Environmental Harm Prevention and Remedy and Implementing Regulation of Ministry of Environment and Ministry of Health No. 17/2009 Coll., on Determination and Remedy of Ecological Harm on Soil; Act No. 157/2009 Coll., on Disposal of Mining Waste; Act No. 76/2002 Coll., on Integrated Pollution Prevention and Control; Act No. 100/2001 Coll., on Environmental Impact Assessment, Act No. 250/2016 Coll., on liability for offences and proceedings in respect thereof; Act No. 251/2016 Coll., on certain offences; Act No. 40/2009 Coll., the Criminal Code; and Act No. 418/2011 Coll., on Criminal Liability of Legal Entities, plus other special acts (nuclear energy) and implementing regulations. Each of the aforementioned laws contains its own procedure for assessing environmental liability by administrative (as opposed to court) action.

2. Is there a definition of contaminated land?

There is no general legal definition of "land contamination" in the relevant Czech laws. However, there are definitions of ecological harm and pollution of environment sources stipulated by the relevant laws (e.g., Protection of Agricultural Soil Fund Act, Environment Act, Environmental Harm Prevention and Remedy Act, Integrated Pollution Prevention and Control Act, and the Criminal Code) that can also be applied to contamination of land and soil in a particular case.

According to the Environment Act, "pollution of environment" means bringing the physical, chemical or biological components into the environment, as a result of human activity, that are extraneous to the given environment by their nature or quantity. In addition, "harming the environment" means the worsening of its state by pollution or other human activity in excess of the level allowed by applicable laws. "Ecological harm," which is defined as "a loss or weakening of the natural functions of ecosystems caused by damage of their individual elements or by infringement of their internal bonds and processes as a result of human activity," arises as a result of harming the environment.

For example, under the Environmental Harm Prevention and Remedy Act, the general definition of ecological harm is provided. It is defined as adverse measurable change of an environmental source or measurable deterioration of its functions, which may show directly or indirectly. The change may occur, among others, on soil, by pollution, which represents a serious risk of adverse effect on human health resulting from direct or indirect induction of substances, preparations, organisms or microorganisms on the earth's surface or underneath it.

In addition, there are certain provisions in the respective laws and regulations (e.g., Regulation of the Ministry of Environment No. 153/2016 Coll. relating to the contamination of agricultural land) listing the substances, the presence of which (or a presence exceeding stipulated limits) in, on or under the land, as the case may be, is considered pollution causing ecological harm.

According to the Protection of Agricultural Soil Fund Act the owners and other users of the land that is included in the agricultural soil fund, will have to use the land in accordance with the characteristics of the relevant plot of land type (as registered in the Czech Real Estate Register)and furthermore there is a general (i.e., not only with respect to the owners/users of the land) prohibition to (i) pollute the agricultural land by introducing substances or organisms in an amount exceeding the levels stipulated by law; (ii) cause threat of erosion to the agricultural land by exceeding the permitted levels (determined by considering the average long-term annual loss of land in tonnes per hectare); (iii) use agricultural land for non-agricultural purposes without the required permit; and (iv) adversely affect the physical, biological and chemical qualities of the soil by techniques such as drying, wetting, covering or condensing. The aforementioned Act also regulates the competence of the Czech Environmental Inspectorate in the area of agricultural soil fund protection (in addition to other competent authorities such as the relevant municipal authority).

Given the foregoing, the competent public authority, authorized on the basis of an applicable law, identifies (or investigates based on a third person's notification) the existence of land/soil contamination, its cause and its originator. Based on its findings, the authority issues a decision imposing remediation works required for cleanup of the identified pollution.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

The following acts, although some indirectly, include provisions that can be applied to the cleanup of contaminated land procedure: Protection of Agricultural Soil Fund Act, Wastes Act (including implementing on Ordinance on the details of waste management); Environment Act, Protection of Nature and Environment Act; Environmental Impact Assessment Act; Environmental Harm Prevention and Remedy Act (including implementing regulation on Determination and Remedy of Ecological Harm on Soil); and Disposal of Mining Waste Act.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Subject to certain special conditions regulated in the applicable laws, the principle of "the polluter pays" is generally applied in relation to pollution control, including contamination of land/soil. The foregoing reflects the fact that, under Czech law, environmental liability has similar features and is based on the same principles as liability for damage regulated in the Civil Code; however, environmental liability applies also with respect to pollution caused by the owner to its own property (as a matter of fact excluded from the civil liability principles).

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

Generally, if the polluter cannot be found, the owner may be obligated to implement certain remedial measures.

According to the Environmental Harm Prevention and Remedy Act, the obligations thereunder shall be passed on to a legal successor of the polluter (operator) and, if there are more of them, and the person to whom the relevant obligation has been transferred is not agreed upon, they are liable jointly and severally. The polluter also bears the costs of the remedial works, with exception of the specific cases stipulated by the Environmental Harm Prevention and Remedy Act.

With regard to agricultural land (including land temporarily unused but intended for agricultural purposes), again the polluter bears liability that is also transferred to its legal successor and bears the costs of the remedial works. There are no provisions addressing the situation when the polluter cannot be identified anymore. However, the owners and users of the affected property who are not

polluters at the same time, are obliged to allow access to the property for the purpose of the cleanup and bear limitations in the ordinary use of the property.

If the originator of the environmental damage cannot be identified or the originator has ceased to exist or has died without a legal successor (so-called old environmental burdens) - in this case, the costs of preventive and corrective measures are borne by the state.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

Generally, if the polluter cannot be found, the owner may be obligated to implement certain remedial measures.

There are no specific rules in the applicable laws regarding the allocation of costs for the environmental cleanup of contaminated land between the owner and the tenant of the particular land. Generally, the decision of the competent authority is relevant (the authority actually chooses who will be responsible for the cleanup and how the costs will be apportioned, including state budget incentives if applicable), and the owner and the tenant will settle their mutual rights (especially should the tenant be ordered to conduct the cleanup) on the basis of the terms of their contractual relationship or under the general principles of civil law.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes. Remedial obligations also concern historical contaminations; however, this is a very sensitive topic in former communist countries and no specific regulations have been adopted so far. There is no definition of "historical contamination" provided in the applicable legal regulations. The competent authority has the right, subject to the conditions set out in the particular act, to order remediation of any contamination (including pollution caused, for example, by the former owner or lessee) that it considers ecologically harmful in the terms described above.

There exists a special category of "historical ecological harm" regulated under Czech law that relates to privatization of state property, according to Act No. 92/1991 Coll. on Conditions of the Transfer of Property from the State to Other Persons (the "Privatization Act"), which is subject to special financing conditions. According to the Privatization Act, the Czech government, when deciding about the privatization of a state enterprise or other assets, may decide that the Ministry of Finance (formerly the National Property Fund) will enter into an indemnity agreement with the private acquirer of the privatized assets, under which the acquirer will be indemnified by the state for the costs sensibly expended in connection with the settlement of the environmental liabilities occurring prior to privatization.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

As mentioned above, the applicable laws stipulate, in certain cases, the limits to polluting substances that are permissible in, on or under the land and that, if exceeded, will require cleanup. Under the Environmental Harm Prevention and Remedy Act, the competent authority can order, prior to commencement of the administrative proceedings, that cleanup be carried out in the case the authority identifies a danger of ecological harm to a particular site.

Further, if there is a justified suspicion that as a result of an operational activity stated in the relevant annex to the Environmental Harm Prevention and Remedy Act, ecological harm to soil was caused, the relevant authority shall ensure that a risk analysis be prepared without undue delay. Under such circumstances, the administrative proceedings concerning remedial measures are interrupted until

such risk analysis is completed. In addition, if remedial measures under the Environmental Harm Prevention and Remedy Act are imposed, no remedial measure with respect to the relevant ecological harm may be imposed under the Protection of Agricultural Soil Fund Act.

In relation to the construction of certain new buildings and facilities (determined by the Integrated Pollution Prevention and Control Act and by the Environmental Impact Assessment Act) on plots of land, the environmental impact assessment needs to be carried out according to the applicable law. The opinion issued by the respective environmental impact assessment authority serves as an expert underlying document and is binding for the subsequent issuance of a building permit.

6. What level of cleanup is required?

In general, environmental cleanup may be required where the conditions of applicable laws are fulfilled, such as in cases when ecological harm within the meaning of Act on Environmental Harm Prevention and Rectification, or the Act on Environment, as amended, is caused. The owner and all his legal successors are strictly liable for environmental harm and proof of the violation and of fault in the form of intent or negligence is not required.

The level of contamination must fall within the limits stipulated by the applicable law or, as the case may be, in the decision of the competent authority or relevant methodology of such authority, if applicable.

Under Section 11 of the Environmental Harm Prevention and Remedy Act, the competent authority (i.e., the Czech Environmental Inspectorate [CIZP]) shall carry out a risk analysis for such contaminated land and propose possible methods for the cleanup. CIZP consequently orders the polluter to perform the cleanup in accordance with the proposals.

7. Are there different provisions relating to the cleanup of water?

Regulation of water contamination is primarily included in Act No. 254/2001 Coll. on Waters, as amended, and its implementing regulations. According to the Act on Waters: if the competent water administration authority cannot identify the polluter, the acquirer of the property to which the contamination of water is related (who is not, at the same time, the polluter) or their legal successors, and if the circumstances require immediate action (i.e., there is a threat of extensive pollution of overground or groundwater), the authority can order that an entity licensed according to the specific law conduct the cleanup of the polluted water source or lode at the expense of the special fund (which each regional municipality must maintain, at least in the amount of CZK10 million or approximately EUR370,000). The owners of the affected property who are not obligated to conduct the cleanup themselves are obliged to allow access to their property for the purpose of the cleanup and bear limitations of use for reasonable compensation.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Since 2009, perfluorooctane sulfonic acid and its derivatives (PFOS) have been included in the international Stockholm Convention to eliminate their use. PFOS has been restricted in the EU for more than 10 years already, under the EU's Persistent Organic Pollutants (POPs) Regulation.

In June 2022, the Stockholm Convention parties decided to include PFHxS, its salts and related compounds in the treaty. This global ban is expected to enter into force at the end of 2023.

In February 2023, the European Chemicals Agency (ECHA) published a proposal to ban per- and polyfluoroalkyl substances (PFAS). A six-month public consultation on the proposed restriction began on 22 March 2023, giving stakeholders the opportunity to submit information on their uses of PFAS and the availability of fluorine-free alternatives.

The scope of the restriction proposal is very broad (covering more than 10,000 PFAS substances) with two possible restriction options. Restriction Option 1 would result in a full ban after an 18 month transition period whereas Restriction Option 2 would result in some instances in a phased ban, with specific time-restricted derogations applying for particular uses.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

In a strict legal sense, it is not a criminal offense to own contaminated land if such contamination originated prior to the acquisition of the land or by the act of another party.

Nevertheless, if the level of land contamination caused by the particular polluter meets the criteria of environmental harm or endangerment as defined in Act No. 40/2009 Coll., the Criminal Code, such contamination will then be prosecuted as a criminal offense under the rules set forth in the Criminal Code and will be decided by the relevant court.

Since 1 January 2012, legal entities can be criminally prosecuted under Act No. 418/2011 Coll. on Criminal Liability of Legal Entities, which, among other things, establishes liability of legal entities for explicitly listed environmental criminal offenses. These offenses under Czech law can also be committed by foreign legal entities that have their registered office, enterprise, branch office or property in the Czech Republic, or which only perform their activities therein.

A legal entity is, in principle, liable for criminal offenses committed in its name or in its interest, or within its activities by the following persons:

- Statutory bodies, members of statutory bodies or other persons authorized to act on behalf of the legal entity.
- Persons conducting management or control functions
- Persons exercising decisive influence on the management of the legal entity
- An employee of the legal entity when performing his/her employment duties, provided that:
    - such employee acted upon the decision, approval or order of the legal entity (or persons listed immediately above); or
    - the legal entity (or persons listed immediately above) failed to perform measures required by the applicable legal regulations or measures that it can be reasonably expected to take, in particular; it failed to conduct mandatory or necessary supervision of activities of its employees or other subordinates or failed to conduct necessary measures for avoidance of damage and consequences of the criminal offense.

The Act on Criminal Liability of Legal Entities refers to the Criminal Code with respect to defining environmental criminal offenses. Thus, certain environmental criminal offenses listed in the Criminal Code apply to both natural individuals and legal entities. Moreover, in the case of legal entities, their criminal liability will be passed to their legal successors.

According to the Criminal Code, a criminal offense is committed by whomever who, in contradiction with other statutory regulations, willfully:

- damages or endangers soil, water, air or other environmental elements in a substantial area or extent, or in a manner that can cause serious injury or death, or if the elimination of effects of such action requires substantial expenses; or

- increases such environmental damage or endangerment, or hampers diversion or abatement thereof.

Natural individuals shall be punished by imprisonment of up to three years or by a ban on the activity. According to the same provision of the Criminal Code, and subject to the qualified conditions provided therein (e.g., long-lasting ecological harm, ecological harm that requires enormous funds to remedy, repeated commission of this offense or commission of this offense with intention of gaining substantial profit), the offense is punishable by stricter punishments (i.e., longer imprisonment, a longer ban on the activity or a fine).

In addition, if the above offense of causing ecological harm is committed as a result of gross negligence, the natural individual who committed the offense can be punished by imprisonment of up to six months or by a ban on activity. Again, the stricter punishments are based on certain qualified conditions (e.g., the offense is committed in connection with the person's profession or function).

A separate criminal offense is committed, regardless of whether by willful misconduct or gross negligence, in case of breaching a special legal regulation by damaging or destroying a significant element of the landscape, a cave, a specifically protected area, a Site of Community Importance or Special Protected Area (both latter types of areas are established pursuant to the EU legislation). For this criminal offense to be committed, the reason for protecting such part of the environment must either cease to exist or be substantially weakened by the actions described in the previous sentence.

The applicable punishments for a natural individual include imprisonment of up to three years, ban on activity or forfeiture of an asset.

Furthermore, in connection with the Wastes Act, unlawful transport, misplacement, storage or other handling of waste (regardless of whether it is willful or negligent) causing damage to or endangering the environment and requiring enormous funds to remedy, is punishable by a ban on the activity or by imprisonment of up to two years. If certain aggravating circumstances are present, the punishment is more severe.

In general, pursuant to the Criminal Code, endangering of or damage to soil, water, air or other elements of the environment also includes the operation of an installation in which dangerous activities are carried out, or in which hazardous substances or mixtures are used or stored, unless a permit pursuant to the applicable legal regulations is duly obtained.

A legal entity may be sanctioned by a fine, forced publication of the court's decision, prohibition of its business activities, prohibition of participation in public tenders, prohibition of receiving public funding or, in extreme cases, forfeiture of assets or forced dissolution.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Yes, provided that the noncompliance with the requirement to clean up means, at the same time, a willful or negligent increase in or complication of remedy of the environmental harm. Such noncompliance with the requirement to clean up may be considered a criminal offense of harm and endangerment of the environment (please see above).

11. Can the legal entity be held liable?

Since 1 January 2012, legal entities can be criminally prosecuted under Act No. 418/2011 Coll. on Criminal Liability of Legal Entities, which, among other things, establishes liability of legal entities for criminal offenses, and liability of legal entities for above mentioned environmental criminal offenses is not excluded. These offenses under Czech law can also be committed by foreign legal entities that have their registered office, enterprise, branch office or property in the Czech Republic, by legal enterprises which only perform their activities therein or own property in Czech Republic.

A legal entity is, in principle, liable for criminal offenses committed in its name or in its interest, or within its activities by the following persons:

- Statutory bodies, members of statutory bodies or other persons authorized to act on behalf of the legal entity
- Persons conducting management or control functions
- Persons exercising decisive influence on the management of the legal entity
- An employee of the legal entity when performing his/her employment duties, provided that:
    - such employee acted upon the decision, approval or order of the legal entity (or persons listed immediately above); or
    - the legal entity (or persons listed immediately above) failed to perform measures required by the applicable legal regulations or measures that it can be reasonably expected to take, in particular; it failed to conduct mandatory or necessary supervision of activities of its employees or other subordinates or failed to conduct necessary measures for avoidance of damage and consequences of the criminal offense.

Moreover, in the case of legal entities, their criminal liability will be passed to their legal successors.

A legal entity may be sanctioned by a fine, forced publication of the court's decision, prohibition of its business activities, prohibition of participation in public tenders, prohibition of receiving public funding or, in extreme cases, forfeiture of assets or forced dissolution.

12. What authority enforces cleanup?

The competent public authority that issued the decision imposing remediation works required for the cleanup of the identified contamination (pollution) enforces the cleanup.

13. Are there any defenses?

The activities of the competent authorities are primarily regulated by the Administrative Proceedings Act, which provides certain instruments of defense against the authorities' decisions. In addition, if the particular person/entity feels harmed by the decision of the particular authority and its appeal with the superior authority is not satisfactorily decided, then such person/entity may file a special action with the competent Regional Court seeking the cancellation of the particular administrative decision.

As far as criminal offenses are concerned, criminal liability ceases to exist if the legal entity voluntarily refrains from continuing the unlawful act and either: (i) averted the danger that occurred to the interest protected by the Criminal Code, or prevented the occurrence of, or remedied the detrimental consequence; or (ii) reported the criminal offense to the state prosecutor or to the police authority at such a moment when the relevant danger could have been averted or the relevant detrimental consequence could have been prevented. The legal entity will not be held liable if it took all appropriate measures that could have been reasonably expected to prevent any of the above mentioned persons from causing a crime.

14. Can a third party/private party enforce cleanup?

Yes, but generally only by filing a court action. This applies, in particular, to the so-called "neighbor's rights" regulated in the Civil Code. The owner of a plot of land is required to refrain from causing emissions of waste, smoke, dust or smell affecting other persons' enjoyment of their property. If there are emissions resulting from the operation of an enterprise or an installation approved by the relevant authorities, the neighbor is entitled to pecuniary damages only. This restriction of neighbor's rights even applies if the harm was caused by circumstances that had not been considered when such

authorization was provided. The situation is different if the operation exceeds the boundaries of its authorization. In extreme cases of distress and necessary defense, the affected party may be entitled to clean up the property itself.

15. Can third parties claim damages?

Yes. The general provisions of liability for damage regulated in the Civil Code (including real damage, lost profits and, in specific cases, immaterial damage) also apply in the case of damage caused by the polluter to a third party by breaching its obligation in the special law (i.e., the applicable environmental law).

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

Yes, Releases and transfers of pollutants must be reported according to EU Regulation No 166/2006, Act No. 25/2008 Coll., on the Integrated Pollution Register and the Integrated System for Compliance with Environmental Reporting Obligations and Government Regulation No. 145/2008 Coll., establishing a list of pollutants and threshold values and data required for reporting to the Integrated Pollution Register.

Subjects that have a duty to report are defines in the aforementioned EU Regulation or in the Act. The following information must be reported:

- Releases to air, water and land of any pollutant listed in Annex II of the EU Regulation for which the relevant threshold value has been exceeded, off-site transfers of hazardous waste exceeding 2 tonnes per year or of other waste exceeding 2000 tonnes per year, off-site transfers of any pollutant listed in Annex II to the Regulation and contained in waste water intended for treatment for which the threshold set out in Annex II, column 1b, to the EU Regulation has been exceeded.
- Leakages of pollutants when exceeding their threshold values according to Annex No. 1 Regulation No. 145/2008 Coll.
- Transfers of pollutants, in excess of their threshold values, in off-site waste arising directly or in direct connection with the activities of the installations operated, according to Annex 2 to Regulation No. 145/2008 Coll.

The obligation to inform the buyer on the contract of sale about the defects of the property is regulated through the Civil Code. It is the seller's legal obligation to warn the buyer of defects, so it is always advisable to mention them either directly in the transfer contract or in the transfer report. Failure to comply with this obligation may result in the buyer exercising rights arising from the defective performance (removal, discount, etc.).

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No, land contamination is not registered in the Land Registry.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

No. But, the competent authority can impose, as appropriate, remedial measures on the legal successor of the operator of the installation who is not the originator of the defective condition. The obligations arising from the corrective measures and the decision to restrict or stop the operation of the installation imposed on the operator of the installation pass onto his legal successor.

19.2. Contractually?

The seller (polluter or not) and the purchaser of the contaminated land can agree in the purchase agreement that the purchaser will be liable for any cleanup costs ordered by the competent authorities if there are any. However, such an agreement would be enforceable only between the parties. The competent authority would still be authorized to hold the seller (former owner of the contaminated land) liable if the cause of the pollution can be proved. However, the competent authority, if appropriate and required, can impose remedial measures on the operator, even if the operator and the originator of the defective condition are different persons.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

There is no special regulation on land contamination limits relating to all types of land. The only currently applicable provision are in Regulation of the Ministry of Environment No. 271/2019 Coll. and No. 153/2016 Coll. relating to the contamination of agricultural land Regulation of the Ministry of Environment No. 271/2019 Coll., relating to the contamination of agricultural land.

Egypt

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

The Environmental Law No. 4 of 1994 ("**Environmental Law**") and its executive regulations regulate environmental protection in general and includes a chapter specific to the protection of land. Additionally, the Waste Management Law No. 202 of 2020 ("**Waste Management Law**") and its executive regulations is relevant in relation to the management and remediation of wastes. The competent authority tasked with environmental protection under the Environmental Law and the Waste Management Law includes a number of agencies. However, the main regulators are the Egyptian Environmental Affairs Agency (EEAA) and the Waste Management Authority (WMA), both under the supervision of the Ministry of Environment.

2. Is there a definition of contaminated land?

Worth noting that the environmental legislation does not clearly distinguish between the concept of pollution and contamination and both terms are used interchangeably in translations. The Environmental Law provides more broad definitions of environmental damage and environmental pollution whereby environmental pollution is defined as any changes in the characteristics of the environment which causes damage, directly or indirectly, to human health or affects a human's ability to live their normal life, or causes damage to natural habitats, organisms or biodiversity. Likewise, environmental damage is defined as affecting the environment in a manner which reduces its value, distorts its environmental nature, depletes its resources, or harms living organisms or antiquities.

The abovementioned definitions apply to environmental damage and environmental pollution, as appropriate, irrespective of whether they relate to soil, air, water or otherwise. Thus, land would be considered contaminated land if it can be captured within the scope of the above definition for environmental damage.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Clean-up or remediation of polluted land is addressed under certain provisions of the Environmental Law and the Waste Management Law which provide a procedure for clean-up to be followed under the supervision of the EEAA or the WMA, as applicable, in particular where hazardous waste is produced[61]. In accordance with the Waste Management Law, hazardous waste is waste containing organic or inorganic components or compounds which may harm human health or the environment due to their physical, chemical or biological properties, or because they present another dangerous characteristic such as being infectious, flammable, explosive or toxic material.

Where such hazardous waste is being produced, the owner of the polluting entity or the person responsible for operating it must clean-up the entity itself as well as the land on which it operates where such entity has been moved or has ceased its operations.

Moreover, clean-up of land is defined under the Executive Regulations of the Waste Management Law as any operations which result in the decrease or elimination of the pollution levels at which the soil or site is considered polluted to a level which allows safe future use of the site, whether it be for

[61] Article 33 of the Executive Regulations of the Environmental Law

residential, industrial or commercial purposes, within an acceptable environmental, health and economic framework. This includes the polluted soil or site and is not limited to the sites for the safe disposal of waste once they reach their maximum capacity or the closure of said sites for any reason, or the site for random dumping of waste. The level of clean-up is to be determined based on the future use of the site and in line with the global standards applied in this regard.

Additionally, the Environmental Law provides the EEAA with measures to have the polluter remedy the contamination. Such measures include notification of the violation with a remedy period of 60 days. The EEAA may extend such period and may, in the case of failure to remedy, carry out the same at the expense of the liable entity. It may also suspend the activities of the entity until the violation is remedied and such without affecting the latter's obligation to pay salaries to its employees. In case of gross environmental danger, the EEAA must immediately suspend the activities causing the same, using all available means and procedures.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

In general, the owner of the polluting entity or the person responsible for operating it is primarily responsible for the clean-up[62].

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

If the polluter was not identified, the land owner will be assumed to be the polluter unless he proves otherwise. However, if the polluter is identified (as not being the land owner) but cannot be found, such will not shift the liability in this case to the land owner.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

The polluters will both be liable, each to the extent of its contribution to the incident. The division of the liability will be decided by the judge in light of the factual arguments and merits of the case.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Each entity is required prior to the construction of its project (or any expansions thereto) to submit an environmental impact assessment study to the EEAA based on which it obtains an environmental approval to carry out the project. Starting from operation, the entity is required to hold an environmental register, which is a log in which it registers the impact of its activities on the environment. The EEAA inspects such register and carries out its own test to verify the credibility of the information reflected therein.

Based on the mentioned process, it is possible to determine land condition prior and post activities. Therefore, it is possible to determine what would be deemed historical and possibly identify the liable person for historical contamination. If no person was identified as liable for historical contamination, it strictly should be the State that carries out the cleanup and its expense, assuming the land is owned and possessed by it. For privately owned land, the owner will carry such burden and depending on its contractual arrangements with the seller of the land may pursue the same for indemnification before the courts.

[62] Article 33 of the Environmental Law, and Annex (8) under the Executive Regulations of the Waste Management Law.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The Environmental Law provides for limits for polluting, dangerous and hazardous substances, as well as requirements on how they should be handled. The EEAA carries out inspection visits and may take samples to test in order to identify violations. The EEAA decides then on whether and what kind of remedy is required.

Moreover, an environmental register must be maintained by the entity in question in which must be recorded, among other information, the pollutants emitted, their quantity, and their impact on the environment, the safety protocols in place and the tests conducted and samples taken[63]. The EEAA is responsible for monitoring the information recorded in the environmental register of each entity and verify its conformity with their findings during inspections and otherwise[64].

6. What level of cleanup is required?

This is assessed and determined by the EEAA, and, where applicable, the WMA, on a case by case basis depending on the magnitude of the violation.

7. Are there different provisions relating to the cleanup of water?

Yes, the law has a separate chapter for water pollution. Also, there is a law specific to the protection of the river Nile water and tributaries. Egypt is party to international treaties regulating the topic.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Egypt has signed in 2002 and ratified in 2003 the Stockholm Convention on Persistent Organic Pollutants (POPs) (the "**Convention**") prohibiting and/or restricting the production, use and/or import and export of certain 'forever chemicals' listed under the annexes of the Convention. In that respect, the Executive Regulations of the Waste Management Law provide in the context of food production sites that they must be equipped with mechanisms for the breakdown and sterilization of infectious materials and products without their contamination with toxic inorganic or persistent organic pollutants and reuse of the output in the manufacture of unconventional fodder, energy production, organic fertilizers or safe burial[65]. The thresholds and criteria for production of POPs by the entity in question is evaluated and determined by the WMA and any other competent authority during the licensing phase of the entity to carry out its activities.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

It is a criminal offense to commit violations of the provisions of the Environmental Law or the Waste Management Law, and such are punishable by fines and possible incarceration, depending on the gravity of the violation.

[63] Article 17 of Executive Regulations of the Environmental Law.
[64] Article 22 of the Environmental Law.
[65] Item 7 of Annex 10 of the Executive Regulations of the Waste Management Law.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Please see response to question 8. The usual course of action is that the EEAA provides a warning to the entity, setting out the cleanup requirements that if not complied with within a set timeline could lead to the EEAA taking charge of the cleanup at the cost of the entity and shutting down the entity.

11. Can the legal entity be held liable?

Under Egyptian law, only individuals may become subject to criminal liability. However, the legal entity may be held liable to pay any applicable fines.

12. What authority enforces cleanup?

Mainly the EEAA; however, there may be other competent agencies, depending on the activity and sector in question, including the WMA where the matter relates to waste management.

13. Are there any defenses?

The entity will need to demonstrate that it is not liable for the contamination. This will depend on the type of violation and the elements of the case.

14. Can a third party/private party enforce cleanup?

That is not possible unless contractually agreed upon. Third parties' and private parties' complaints and claims for cleanup must be directed to the EEAA.

15. Can third parties claim damages?

Third parties can claim damages from the polluters before the courts if they have suffered injury resulting directly from the polluters' action or inaction.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

Under Egyptian law, a seller is required to disclose to the buyer all material information in relation to the property object of the sale. Failure to disclose such information causes the purchase agreement to become voidable by the innocent party. Due to the potential environmental impact of contaminating activities, such information may be considered material and must therefore be disclosed to any potential purchaser.

In light of the above, it is generally advised that potential purchasers of land appoint an environmental consultant to carry out appropriate due diligence in relation to the environmental aspect of the target land. However, this exercise is not a legal requirement in Egypt.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

There is no legal requirement in Egypt to register a declaration of contaminated land in the Land Registry. However, the obligation to notify the EEAA and the WMA, where applicable, of any contamination of the land. The polluting entity is legally required to prepare a report describing the contaminated site including, the type of pollutants, the level of contamination and the level of diffusion of the contamination to be determined via testing and analysis of the soil, all in accordance with the guidelines prepared by the WMA. Additionally, the polluting entity must prepare an impact assessment report in relation to the clean-up process including the soil decontamination plan which

must indicate the pollutants present in the soil and the targeted decontamination levels. This impact assessment report must be submitted to the EEAA for review and approval.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

It is not a legal requirement. However, it is recommend practice. Please refer to our response under question 16 above.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

It is not a legal requirement. However, it is recommend practice.

19.1. Under the general law?

Failure to comply with statutory clean-up is a criminal offense that, in principle, is personal in nature. Thus, liability for clean-up may not shifted. That being said, the responsible party may carry out the clean-up process through subcontractors, although the latter will only be liable for the performance of their contractual obligations.

19.2. Contractually?

Please refer to our response under question 19.1 above.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Under Egyptian law, a distinction is made between patent defects and latent defects discovered in the land subsequently to the completion of the purchase. A patent defect is a defect which can be discovered by a purchaser by conducting reasonable inspection of the land. By contrast, a latent defect is one which would could not have been discovered by a reasonably diligent purchaser. Accordingly, the seller is not liable for patent defects discovered in the property in question after completion of the sale except in cases of negligence or fraud. On the other hand, the seller would be liable to the purchaser for any latent defects discovered in the property post-completion. In this case, the purchaser would be entitled to indemnification by the seller and may void the purchase where the defect is material.

In light of the above, it is advised that potential purchasers of land appoint an environmental consultant to carry out a due diligence exercise from an environmental perspective on the target land. Prior to purchase and delivery, the environmental status of the land should be documented in the delivery minutes to evidence transfer of possession. Moreover, an undertaking must be carried out by the seller to indemnify and defend the purchaser against any claims with respect to the land condition prior to transfer of possession.

England & Wales

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

The primary law on land contamination was introduced by the Environment Act 1995, which inserted a new Part IIA into the Environmental Protection Act 1990.

Known as the "Contaminated Land Regime," this system requires local authorities to identify and investigate contaminated land and, in appropriate cases, require "appropriate persons" to remediate the land (see below). The provisions of the Contaminated Land Regime came into force on 1 April 2000, and are accompanied by the Contaminated Land Statutory Guidance published by the Department for Environment, Food and Rural Affairs (DEFRA) in April 2012 (the "Statutory Guidance").

Note that certain other pieces of legislation provide the authorities with powers to require clean up of contamination, including the Pollution Prevention and Control Act 1999, the Environmental Permitting (England and Wales) Regulations 2016, and the Wildlife and Countryside Act 1981.

The implementation of the EU's Environmental Liability Directive through the Environmental Damage (Prevention and Remediation) Regulations 2009 also has had an effect on the way contaminated land is dealt with in England & Wales. The directive and its implementation are discussed further in question 20.

2. Is there a definition of contaminated land?

For the purpose of the Contaminated Land Regime, "contaminated land" is defined as "any land, which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

- significant harm is being caused or there is a significant possibility of such harm being caused to the health of living organisms or causing other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property; or significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused."

Additionally, the Contamination Land Regime was extended by the Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 (SI 2006/1379) and Radioactive Contaminated Land (Modification of Enactments) (Wales) Regulations 2006 (SI 2006/2988) to include contamination by radioactive substances.

In determining whether land is contaminated, a local authority must act in accordance with the Statutory Guidance, which includes strict prescriptions as to what will amount to "harm," "significant" harm and "significant" pollution of controlled waters. In addition to satisfying itself that the above definition is met, the local authority is required to identify that there is a "significant contaminant linkage," consisting of:

- a source (i.e., a contaminant or pollutant in, on or under the land, which has the potential to cause significant harm to the receptor or target);
- a receptor or target (i.e., an organism, human being, ecological system, crops, livestock, property or controlled waters, which are being, or could be, harmed by the contaminant); and

- a pathway (i.e., a route by which the receptor is being, or could be, exposed to or affected by, a contaminant).

Unless the local authority finds this "contaminant linkage" and it is "significant" the land is not contaminated for the purposes of the regime.

The Environment Agency has developed several analysis tools to assist in determining and categorizing the levels of contamination present at sites. This non-statutory technical guidance is intended to assist in interpreting the definition of contaminated land and includes an ecological risk assessment (ERA) framework and associated soil screening values (SSVs) used to assess the threat to ecosystems posed by various contaminants in soil. In addition, the contaminated land exposure assessment (CLEA) model uses soil guideline values (SGVs) to assist in determining the risk to human health from contaminants in soil. For contaminants where screening levels are specified, Category 4 screening levels (C4SLs) are used instead of SGVs to assess the level of risk. The Statutory Guidance acknowledges that local authorities may use generic risk assessment criteria of this nature to inform certain decisions under the Contaminated Land Regime, provided they use these tools in accordance with the Statutory Guidance.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes. As mentioned above, there are a number of statutory provisions that govern remediation of contaminated land, but the Contaminated Land Regime is the primary vehicle for requiring clean up.

While there is no positive duty of disclosure of contamination in the UK (i.e., polluters and owners/occupiers are not required to inform the enforcing authorities of the presence of contamination on, in or under land, although there is an exception to this in relation to the Environmental Liability Directive identified in question 20), authorities have a duty to investigate, designate, and in certain circumstances, require remediation of contaminated land. Remediation of contaminated land may also be triggered by:

- redevelopment of the land, in that planning permission for redevelopment of contaminated land is typically granted subject to conditions requiring remediation of the site to a standard, making it "fit for purpose"; or
- the undertaking of certain industrial activities on the land; surrender of Environmental Permits, formerly PPC Permits, can trigger remediation obligations, and certain other permits relating to environmental matters can include a reporting obligation where limits are or may be exceeded, or harm has been or may be caused to the environment.

The Contaminated Land Regime provides that if a local authority identifies land as contaminated, it has a duty to identify the "appropriate person" (see question 4), who will be the person responsible for carrying out any necessary remedial works and for the costs of those works. For particularly polluted sites that are designated as "special sites," the Environment Agency and Natural Resources Wales take over the role of the enforcing authority in place of the local authority for England and Wales respectively. The Contaminated Land (England) Regulations 2006 (SI 2006/1380) and Contaminated Land (Wales) Regulations 2006 (SI 2006/2989) provide details on when land should be designated as a "special site".

The local authority must undertake a three-month consultation period with the appropriate person (except where there is imminent danger of serious harm or contamination), a period designed to enable the appropriate person to reconcile the scope of the remediation work with that prescribed by the relevant enforcing authority. If an agreement is reached, the appropriate person is required to complete a binding remediation statement. If an agreement has not been reached by the end of the

three-month consultation period, the local authority will serve a Remediation Notice on each "appropriate person," apportioning liability between them in accordance with the Statutory Guidance, and specifying what each is required to do.

The Remediation Notice can require that the state of the site and that of the affected neighbouring sites be assessed, remediated and/or inspected. The work specified must be reasonable, taking into consideration the cost involved and the seriousness of the harm. The enforcing authority is also required to have regard to the hardship rules under the regime.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The Contaminated Land Regime incorporates a limited "polluter pays" principle and provides that the "appropriate person" is liable for remediation of contaminated land. In the first instance, persons who "caused" or "knowingly permitted" the contaminant to be in, on or under the land ("Class A persons") will be held liable for remediation. The High Court delivered some commentary on the application of these tests in *R (on the application of Crest Nicholson Residential Ltd.) v. Secretary of State for Environment, Food & Rural Affairs & Ors* [2010] EWHC 561, specifically that: (a) persons need not necessarily have "introduced" a contaminant to a site to cause it to be in, on or under the site; and (b) persons may cause contaminants to be in, on or under a site by "both action and inaction." If no Class A persons can be found after reasonable inquiry, then the appropriate person will be the owner and/or occupier of the land for the time being (i.e., a "Class B person," per question 4.2 below).

Where there is more than one appropriate person in a liability class, the enforcing authority will give effect to any Agreement on Liabilities between the parties. If no such agreement is in place, there are complex rules in the Statutory Guidance for excluding persons within a liability class and apportioning liability between the remaining persons in that class; most importantly, the "sold with information" and "payments for remediation" tests, which apply to Class A persons, as discussed in question 19.1. However, the exclusion rules can be applied only to the extent that there is at least one remaining person in a liability class.

If there is more than one appropriate person left in a liability class after application of the exclusion tests, the authority will apportion liability between them in accordance with the rules in the Statutory Guidance, which seek to allocate relative responsibility for causing and/or continuing contamination, taking into consideration factors such as the length of time that each person had control over the land, the area of the land under control, and the opportunity that each had to prevent or mitigate the harm caused by the pollution. (See also comments in question 4.3.)

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

If the original polluter(s) cannot be found after reasonable inquiry and no other Class A persons (including "knowing permitters") exist or can be found, then the appropriate person will be the owner or occupier of the land for the time being. If land has been contaminated over a long period of time or was contaminated a long time ago, it may be difficult to find the polluter/knowing permitters, or prove that such Class A persons caused or knowingly permitted the contamination. Note that it is likely that where land is held on a long lease at ground rent, and the long leaseholder has sublet at a rack rent (or has the right to do so), the long leaseholder, rather than the freeholder, will be the "owner" for the purposes of the Contaminated Land Regime.

The term "occupier" is given its "natural" meaning in that it generally physically occupies the site. We note that an innocent owner/occupier (i.e., who has not caused or knowingly permitted contamination) will be liable under the Contaminated Land Regime only for the contamination of their own land, not any third-party land or any water to which the contamination has migrated.

As mentioned above, the appropriate person designations are subject to any Agreement on Liabilities in place between the parties as well as the statutory exclusion tests, as discussed further in relation to Class A persons in question 19.1. The single exclusion test for Class B persons excludes from liability persons that have no interest in the capital value of the relevant land. However, if the application of this test would have the effect of excluding all members of the Class B liability group, the regulator must not apply it and consequently, no exclusion would be made. If more than one person remains in Class B, liability is apportioned in accordance with the Statutory Guidance as discussed in questions 4.1 and 4.3.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

Please see comments on apportioning liability in question 4.1.

In addition, where: (a) no Class A persons can be found; (b) both the owner and the occupier are not responsible for the contamination (i.e., landlord and tenant or licensee); (c) there is no Agreement on Liabilities; and (d) none of the exclusion tests apply to either/any of the parties, then liability is apportioned in relation to the capital value of each party's interests. Thus, if an innocent tenant is paying full market rent for the property with no other beneficial interest in the land, and therefore has no capital interest in the property, the tenant will not be liable under statute.

However, the terms of many leases in England and Wales pass on the obligation and cost of complying with the statute to the tenant. As such, even if the innocent tenant is not a Class A person and is excluded as a Class B person, it may still have an obligation to reimburse the landlord for the cost of the clean up under the terms of the lease.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes. The Contaminated Land Regime is retrospective in that it gives the enforcing authorities the power to require the remediation of contaminated land, including where the contamination is historical. While there is no requirement to alert the authorities to the existence of contaminated land, should the authorities discover historical contamination (for example, through their own investigations, in assessing planning applications or applications for Environmental Permits), they could require remediation of that land.

Even if the original polluter cannot be found after reasonable inquiry, subsequent polluters, knowing permitters, owners and/or occupiers could be held liable in accordance with the "appropriate person" definition, and exclusion and apportionment tests under the Statutory Guidance, or as a result of Agreements on Liabilities in place between persons in the same liability class.

In *R (on the application of National Grid Gas plc) v. The Environment Agency* [2007] 3 All ER 877, the High Court originally held that National Grid Gas plc was liable for remediation of contamination that had been caused decades earlier by public gas undertakers who no longer exist (i.e., the Class A person who could no longer be found). The court held that the Contaminated Land Regime intended that liability for contamination caused by bodies that, had they remained in existence would have been liable as "appropriate persons," should be borne by their statutory successors, even where those successors neither caused nor knowingly permitted the contamination, nor ever owned or occupied the site in question (as was the case in this matter).

The case was appealed directly to the House of Lords (the judicial function of which has now moved to the Supreme Court), which overturned the decision and held that National Grid Gas plc had not taken on responsibility for contamination caused by its nationalized predecessor on the basis of the construction of the Gas Acts under which National Grid Gas plc was established.

The House of Lords stated that it was Parliament's clear intention that the Gas Acts limited transfer liabilities to those "immediately before" the date of transfer. This case relates primarily to the transfer

of liabilities between statutory successors according to the Gas Acts and it is not a judgment that affects other types of historical liabilities for contaminated land.

The Environment Agency can, in certain circumstances, undertake remedial action itself and recover the costs from the appropriate person(s) (although it is required to consider various hardship rules under the Contaminated Land Regime before recovering costs). The Environment Agency may need to pay for remediation for orphan sites.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The Contaminated Land Regime does not prescribe limits to permissible polluting substances. Instead, land will be deemed to be "contaminated" only for the purposes of the regime where, following a risk analysis and in consideration of the Statutory Guidance, the relevant authority determines that the contamination satisfies the definition of "Contaminated Land" in Part IIA of the Environmental Protection Act 1990 and that a significant pollution linkage exists. (See question 2.)

However, as mentioned, remediation of land and water can be required, pursuant to a number of other pieces of legislation in England and Wales. For example, under certain environmental permits, a regulated installation may be subject to emission and discharge thresholds. Breach of such thresholds will amount to an offence under the relevant act or regulations and could require clean up as a result.

6. What level of cleanup is required?

The Contaminated Land Regime states that the local authority may only require actions in a remediation notice that are reasonable with regard to the cost and the seriousness of the pollution or harm. This requirement is in addition to the broader responsibility on the enforcing authority, as a public regulator, to act in a reasonable manner.

Under the Contaminated Land Regime, clean up is required to a level that ensures the land is in such a condition that, in its current use, it no longer falls within the statutory definition of "Contaminated Land." The general principle underlying the standard of remediation required is often described as "suitable for use." The local authority is required to ensure that remediation achieves this standard but, while a person may voluntarily effect remediation to a higher standard, the local authority cannot require this.

Where the authority considers that it is not practicable or reasonable to remediate land to a degree where it stops being "Contaminated Land," the authority should consider whether it would be reasonable to require remediation to a lesser standard. The broad aim should be to manage or remediate the land in such a way that risks are minimized as far as reasonably practicable.

The local authority may only require remediation action in a remediation notice if it is satisfied that those actions are reasonable. In deciding what is reasonable, the authority must consider various factors, having particular regard to: (a) the practicability, effectiveness and durability of remediation; (b) the health and environmental impacts of the chosen remediation options; (c) the financial cost that is likely to be involved; and (d) the benefits of remediation with regard to the seriousness of the harm or pollution of controlled waters in question.

Notable to these requirements are the following principles:

- The relevant authority must undertake a cost-benefit analysis of the initial and ongoing maintenance costs of the remediation prescribed against the benefit of mitigating the harm caused or likely to be caused. If the costs are not warranted as against the likely benefit, the authority cannot direct such remediation to be undertaken.

- Remediation should, by means of the "best practicable technique" (having regard to the above factors) remove or treat the pollutant, or remove or break the pathway, or remove or protect the receptor. Unless there are strong grounds to consider otherwise, the best practicable technique in such circumstances is likely to be the technique that achieves the required standard of remediation to the appropriate timescale, while imposing the least cost on the persons who will pay for the remediation.

Note that the identity or financial standing of any person who may be required to pay for remediation are not relevant to the consideration of whether the costs of a remediation action are reasonable (although they may be relevant in deciding whether the cost of remediation can be imposed on such persons).

7. Are there different provisions relating to the cleanup of water?

The Contaminated Land Regime covers the clean up of water polluted by "contaminated land" and there is also a separate regime for water under Sections 161 to 162 of the Water Resources Act 1991, which enables either the Environment Agency to clean up at the polluter's cost or to require the polluter to carry out remediation works. The Environment Agency has published a policy statement as to which regime should be used in cases where both the Contaminated Land Regime and the Water Resources Act 1991 are potentially applicable.

Note that certain other pieces of legislation provide the authorities with powers to require clean up of contamination, including the Environmental Damage (Prevention and Remediation) (England) Regulations 2015, the Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 (see question 20), and the Wildlife and Countryside Act 1981.

Although not a "clean up" regime as such, the Environmental Permitting (England and Wales) Regulations 2016 (SI 2016/1154) provide a consolidated system for environmental permits and exemptions for water discharge activities and groundwater activities. It is a criminal offence under the Environmental Permitting (England and Wales) Regulations 2016 to cause or knowingly permit a water discharge activity unless this is done in compliance with an Environmental Permit, or there is an exemption from the need for an Environmental Permit. The types of water discharge activities that are covered are listed in a Schedule to the Regulations and include, for example, discharging poisonous, noxious or polluting matter into inland, coastal or other territorial waters.

In the same way, it is also an offence under the Environmental Permitting (England and Wales) Regulations 2016 to cause or knowingly permit a groundwater activity, unless this is done in compliance with an Environmental Permit or there is an exemption from the need for an Environmental Permit. There is a defence, however, if the activity was done in an emergency in order to avoid danger to human health, provided that reasonable steps were taken to minimize pollution and notify the regulator promptly.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

As indicated in the responses to questions 2 and 5 above, the Contaminated Land Regime does not prescribe specific permitted limits for any polluting substances, including PFAS. Whether land is considered to be "contaminated" or not, and whether remediation is required, will depend on the risk analysis described further above.

Note, however, as described in the response to question 2, local authorities will use analysis tools to assist in determining and categorizing the levels of contamination present at sites. Certain of these tools will set screening values for certain PFAS but exceeding these values will not necessarily mean that land is considered to be "contaminated" and subject to remediation.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

It is not in itself a criminal offence to own contaminated land, but a criminal offence may arise from the effects of that contamination.

It is also not an absolute offence to contaminate land (except with respect to illegally depositing waste on land under Section 33 of the Environmental Protection Act 1990), as the law recognizes that industrial processes and other activities will cause contamination. Generally speaking, industrial activity is regulated through the environmental permitting regime under the Environmental Permitting (England and Wales) Regulations 2016.

Criminal liability with respect to contamination of land may attach in the following circumstances:

- Failing to comply with a Remediation Notice under the Contaminated Land Regime.
- Operating without, or in breach of, requisite permits (e.g., Environmental Permits).
- Causing or knowingly permitting a water discharge activity or groundwater activity without the necessary permit or exemption (under Regulation 12(1) of the Environmental Permitting (England and Wales) Regulations 2016).
- Causing or knowingly permitting the deposit of controlled waste in or on any land without there being a waste management license in force for the deposit, under Section 33 of the Environmental Protection Act 1990.

If pollution emitted from contaminated land adversely affects the reasonable comfort of a class of people, then the Attorney General or local authority has the power to bring a case for prosecution for public nuisance.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

The Contaminated Land Regime requires regulatory authorities to enter into a three-month consultation period with "appropriate persons" following the designation of land as contaminated, with a view to agreeing on a voluntary remediation program. If agreement cannot be reached after this time, the relevant authority will serve a Remediation Notice on appropriate persons. It is a criminal offence under the Environmental Protection Act 1990 not to comply with the terms of a Remediation Notice without a reasonable excuse, with the following penalties:

- Criminal prosecution for the offence, on summary conviction before the Magistrates Court (i.e., local court level) with an unlimited fine (and a daily fine of up to one-tenth of the fine imposed for continuing to breach the Remediation Notice) for offences at industrial, trade or other business premises, and in all other cases an unlimited fine (and a daily fine of up to GBP500 for continuing breaches)
- The enforcing authority may seek a mandatory injunction in the High Court where the enforcing authority considers that a fine is insufficient to secure compliance with the Remediation Notice.
- The enforcing authority can carry out the remediation itself and recover the costs from the offender (subject to the hardship rules in the regime).

The regime provides limited grounds of appeal against the service of a Remediation Notice.

11. Can the legal entity be held liable?

Yes. See questions 9 and 10. Generally the legal entity will be responsible for liability under the Contaminated Land Regime rather than individual employees. However, where a legal entity has committed an offence under the Contaminated Land Regime, certain individuals (such as directors and other officers of the company) can be found guilty of the same offence where that offence committed was committed with their consent or connivance, or was attributable to their neglect.

12. What authority enforces cleanup?

The local authority identifies contaminated land and enforces clean up. However, if the land is highly contaminated, it can be designated as "a special site," in which case, the Environment Agency will be the enforcing authority.

13. Are there any defenses?

As discussed above, the Contaminated Land Regime contains complex rules on excluding "appropriate persons" from liability along with certain grounds for appeal against the service of a Remediation Notice. With respect to the offence of failing to comply with a Remediation Notice, it is a defence where the Remediation Notice is served on more than one person and states the proportion of the cost those persons are required to pay (where, for example, joint action is required by the notice), that the only reason the appropriate person did not take the requisite action is that another appropriate person who was liable to bear a proportion of that cost refused or was not able to comply with the requirements imposed on them.

14. Can a third party/private party enforce cleanup?

In addition to the statutory system, the main action used to require clean up is private nuisance under the common law. Private nuisance consists of the unreasonable use of land, resulting in the reasonably foreseeable physical damage of or interference with another's use or enjoyment of land or of some right connected with land.

The nuisance must be "reasonably foreseeable" by the person who carried out the act, rather than the public at large, and therefore, the operators of industrial plants will be expected to have a more thorough knowledge of the effects of their processes than members of the public. The perpetrator will usually have possession and control of the land from which the nuisance emanates, but the original creator of a nuisance will remain liable even when no longer in occupation or control of that land. Nuisance can arise whether activities carried out on the land under dispute cause gradual pollution or a one-off escape of harmful material.

The rule in *Rylands v. Fletcher* is generally seen to be an extension of the law of nuisance. The rule provides that a person, who for his or her own purpose, brings onto his or her land, and collects and keeps anything likely to do mischief if it escapes, is prima facie liable for the damage, which is the natural consequence of its escape. Liability under the rule is strict (as in nuisance), but is also subject to the additional requirement that the damage caused by the escape must be reasonably foreseeable. The rule applies only to the non-natural use of land and is subject to a number of defences. The party affected by the nuisance may seek a prohibitory injunction and/or damages, and clean up may be required to avoid further claims or future breach of any injunction awarded.

Under the Environmental Damage (Prevention and Remediation) (England) Regulations 2015 and the Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 (per question 20), individuals who may be directly affected by actual or possible damage that is within the scope of the Environmental Damage Regime, and certain entities who are otherwise sufficiently interested (e.g., NGOs) may request a competent authority to take action under that regime.

15. Can third parties claim damages?

Yes. Third parties can sue for damages under the law of tort, including bringing an action in nuisance, the rule in *Rylands v. Fletcher*, and/or negligence. Third parties can also sue for damages for breach of contract. For example, a tenancy agreement may contain provisions imposing obligations on the tenant, such as an obligation not to contaminate the land. Breach of such a contractual obligation can result in an award of damages.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

There is an indirect public notification requirement through the obligation placed on enforcing authorities to maintain a Contaminated Land Register. Section 78R of the Environmental Protection Act 1990 requires each enforcing authority to keep a register providing all the details of the remediation process, from the issuing of a Remediation Notice to identification of those upon which a Remediation Notice has been served to convictions for offences committed. The details of any Remediation Notices maintained by either the Environment Agency or Natural Resources Wales will need to be sent to the relevant local authority in whose area the contaminated land is situated. Only information contrary to the interests of national security and certain information considered commercially confidential are not to be listed on this register.

However, aside from this there is no general legal requirement for a seller to disclose details regarding a property's contamination or its remediation in the contract of sale as a result of the fact that UK property law imports the principle of caveat emptor (buyer beware). This means that itis important (and in accord with market practice) for buyers to check to their satisfaction the state and condition of the land to be purchased or leased. Generally, a buyer or tenant will make pre-acquisition/lease inquiries of the seller or landlord, which the seller/landlord is either obliged to disclose or to make no representation and require the buyer/tenant to rely on its own investigations. Typically, sale/lease documents will include environmental representations and warranties by the seller/landlord, which act as a contractual mechanism for requiring disclosure of information by the seller/landlord. The buyer/tenant can bring a claim for damages or rescission of the sale or lease contract for the failure to disclose material matters (unless the seller/landlord has made no representation), or for breach of contract for misdescription, misrepresentation or fraudulent concealment.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No. However, as noted in question 16 above, Section 78R of the Environmental Protection Act 1990 obliges the enforcing authority to keep a register of details relating to Remediation Notices, Remediation Statements and the progression of remediation, amongst other information related to the contaminated land.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

There is no legal requirement to conduct Phase I or Phase II investigations on the sale of land in the UK per se. However, if the sale of land is accompanied by an application for planning permission or an Environmental Permit, site condition reports will be required.

It should be noted that the Law Society for England and Wales' Contaminated Land Practice Note (2020) indicates that, as a matter of best practice, solicitors must consider whether contamination is an issue in every property transaction.

In addition, in order to confirm that the land to be purchased will be good security, lenders may require that the land be investigated for potential contamination.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

As mentioned, although the principle of "polluter pays" remains, there is a general principle under English law that buyers purchase land at their own risk (caveat emptor). The Contaminated Land Regime balances these principles by giving effect to Agreements on Liabilities (see Section 19.2) and, where no such agreement exists, by applying six exclusion-of-liability tests between Class A persons as prescribed in the Statutory Guidance. A more limited range of tests apply to Class B persons.

The local authorities are required to assess on the balance of probabilities whether the tests apply, then apply the tests in sequence and only to the extent that at least one person is left in a liability class. Three of the most important exclusion tests for Class A persons are:

- The "sold with information" test: A polluter is excluded from liability where the polluter sells the land (or provides a long lease of more than 21 years such that the tenant satisfies the definition of "owner") in circumstances where it is reasonable that the buyer bears the liability. The test is that: (i) the land has to be sold on the open market at "arm's length" (i.e., a willing buyer and a willing seller); (ii) the seller must retain no interest in the land (which means that, with limited exceptions, the test does not apply in a sale-and-leaseback situation or where the seller retains the right to inspect the property post-completion); (iii) before the sale becomes binding, the buyer must have had information that reasonably allowed him to be aware of the presence of the contamination; and (iv) the seller must not have materially misrepresented the information about that contamination.

  The Statutory Guidance provides that if a sale took place after 1 January 1990, and the buyer is a large commercial organization or a public body and has permission from the seller to carry out its own investigations then, whether or not the buyer has carried out those investigations, the buyer will be deemed to have sufficient information that reasonably allowed him or her to be aware of the presence of the contamination, and provided the other requirements set out above are met, the property will be "sold with information" and the risk of liability is passed on to the buyer. It is thus likely that in many major commercial property transactions, in the absence of misrepresentation, the risk will be deemed to have been passed on to the buyer (subject to the general rules on the applicability of the liability exclusion tests and the existence of any alternative Agreement on Liabilities, see Section 19.2).

- The "payments for remediation" test: A polluter is excluded from liability if he or she has transferred the responsibility for the contamination to the buyer by reducing the price of the land in question or by agreeing to pay for remediation.

- The "introduction of pathways or receptors" test: The buyer may also assume liability under the exclusion tests (subject to limitations) where the original contaminant only becomes a significant risk after the introduction of later pathways or receptors by the buyer.

19.2. Contractually?

The exclusion tests that were discussed are relatively untested in the UK, and it is not advisable for parties to rely on them alone without ensuring that other mechanisms for protection are also put in place. As such, it is common place for parties to a transaction to enter into an express Agreement on Liabilities, which allocates environmental liability for contaminated land and generally takes the form of risk transfer and allocation provisions in a sale and purchase or lease agreement, making reference to the Statutory Guidance, and may include environmental indemnities.

The Statutory Guidance requires the authorities to "generally" give effect to such agreements, but only where "none of the parties inform the authority that it challenges the application of the agreement." In addition, the guidance directs authorities to disregard Agreements on Liabilities where giving effect to the agreement would increase the proportion of costs to be borne by a person who would be able to claim the benefit of the hardship provisions of the regime.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

The Contaminated Land Regime in practice

The Environment Agency cannot state with certainty how many contaminated sites there are in the UK, but it in 2005 it estimated that around 325,000 sites (300,000 ha) had been subject to current or former use that could have resulted in contamination.

The Contaminated Land Regime, however, was never intended to effect the remediation of all contaminated sites; only those that pose significant risks to human health or the wider environment are dealt with under the regime. Less significant contamination issues are left to the planning system, which imposes conditions on planning permission required when the land is redeveloped.

Clearly, progress in implementing and enforcing the regime has been slow, most likely due to the complexity of the regime and the fact that most of the labour-intensive responsibility lies with local authorities (rather than the Environment Agency), who have limited budgets and represent competing interests. The majority of Brownfield sites in the UK continue to be dealt with through the planning regime as land is redeveloped and through Environmental Permitting provisions in the case of industrial sites.

Public access to information

The public can gain access to information from authorities on environmental issues and this will, of course, include land designated as contaminated. As part of applications for the redevelopment of land that may be contaminated, many local authorities are requiring an environmental audit to be submitted together with the planning application so that they can determine whether the land is too polluted to be suitable for the proposed use. The audit could, however, be used by the local authority to determine whether the property falls under the definition of contaminated land.

In addition, as information from a public body, environmental audits included in planning applications would be available for inspection by the public. It is recommended that advice be sought on what information to include in such audits.

Incentives for development of Brownfield sites

The UK government has said that it wishes to see development of Brownfield sites, in particular for the building of new homes and various funds and grants have been made available to local councils to help revive Brownfield sites for housing, including under the "Levelling Up" initiative.

Further, tax benefits are available to people for cleaning up land acquired in a contaminated state. and Remediation Relief is a relief from UK corporation tax providing a deduction of 150% for qualifying expenditure incurred by companies in cleaning up land acquired from a third party in a contaminated state.

The Environmental Liability Directive

The Environmental Liability Directive (2004/35/EC) came into force in April 2004. The directive establishes a framework designed to prevent significant environmental damage or to rectify damage after it has occurred. The directive does not apply to damage caused by environmental harm prior to 30 April 2007, and is not limited to ground contamination issues.

The directive is based on the "polluter pays" principle and allows regulatory authorities to step in and take action and recover costs from the polluter. Strict liability applies in respect of damage to land, water and biodiversity from activities regulated by specific EU legislation, whereas fault-based liability would apply in respect of biodiversity damage from any other activity. Individuals who may be directly affected by actual or possible damage and certain entities (e.g., NGOs) may request a competent authority to take action.

Under Article 19(1) of the directive, member states were required to bring into force laws, regulations and administrative measures necessary to transpose the directive's provisions by 30 April 2007. The UK missed this deadline for transposition and in June 2008, the European Commission decided to refer the UK and eight other member states to the European Court of Justice for failing to transpose the directive into national law. The fact that the scope of the directive overlapped with existing domestic law governing contaminated land was, in part, the reason for the delay.

In England, the Environmental Damage (Prevention and Remediation) Regulations 2009 (SI 2009/153) came into force on 1 March 2009, and in Wales, the Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 (SI 2009/995) came into force on 6 May 2009, to transpose the directive into national law. Note that the English regulations have been replaced by the Environmental Damage (Prevention and Remediation) (England) Regulations 2015 (SI 2015/810), which came into force on 19 July 2015. These regulations (the "Environmental Damage Regime") closely follow the provisions of the directive and apply to damage to protected species, natural habitats, sites of special scientific interest, surface water, groundwater or land in England after 1 March 2009, or in Wales after 6 May 2009. They also apply to damage to marine waters in England on or after 19 July 2015. The Environmental Damage Regime remains in place following the UK's withdrawal from the EU on 31 January 2020.

DEFRA's 2008 impact assessment for the Environmental Damage Regime reports that there are over 30,000 cases of environmental damage every year in the UK, of which less than 1 percent are estimated to be covered by the Environmental Damage Regime, according to the 2009 updated impact assessment. The Environmental Damage Regime principally affects a limited number of activities, which are already subject to various types of environmental regulatory regimes (set out in Schedule 2 of the relevant regulations).

DEFRA guidance on the Environmental Damage Regime states that the three main regimes for dealing with land contamination should be considered in the following order:

- The Environmental Damage Regime.
- Remediation under the planning system where appropriate.
- Remediation using Part IIA of the Environmental Protection Act 1990 (i.e., the Contaminated Land Regime).

Aspects of the Environmental Permitting (England and Wales) Regulations 2016 also cover land contamination issues, particularly the permit surrender provisions. The regulators should consider any voluntary agreements to remediate in all the above cases.

The DEFRA guidance indicates that the Contaminated Land Regime is likely to be used to address historical contamination while the Environmental Damage Regime is more likely to apply in the context of current pollution incidents.

Importantly, under the Environmental Damage Regime, if an operator of an activity causes an imminent threat of environmental damage (as defined under the Environmental Damage Regime) or an imminent threat of damage, in which there are reasonable grounds to believe that this will cause environmental damage, he or she must immediately take all practicable steps to prevent the damage and unless the threat has been eliminated, notify the appropriate enforcing authority of all relevant

details. This duty to disclose is an exception to the principle that there is generally no duty of disclosure in respect of contamination in the UK. (See answer to question 3.)

The Building Regulations 2010

The Building Regulations 2010 may be of relevance where a purchaser may seek to build on the land in the future. The regulations require reasonable precautions to be taken to avoid risks to health and safety caused by contaminants in the ground to be covered by buildings and associated ground.

The Planning Permission Regime

The Contaminated Land Regime under Part IIA of the Environmental Act 1990 is not the only regime governing liability for contamination. A party may apply to a local planning authority for permission to redevelop contaminated land. The local planning authority may impose conditions in the planning permission to remediate the property. Comparing this to the Contaminated Land Regime, the planning regime does not look to who caused the contamination but rather imposes clean up responsibility upon the party implementing the planning permission.

France

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Article L. 241-1 of the French Environment Code sets the principles of the national policy on the prevention and management of polluted sites and soils. These principles includes:

- prevention and remediation of pollution and management of associated risks;
- specificity and proportionality, implying a case-by-case assessment of the situation of each site;
- risk assessment based on the uses of the site, knowledge of the sources, vectors and targets of exposure and compliance with management values in line with national public health objectives.

In addition, law no 2014-366 of 24 March 2014 created a more specific legislation on the protection of polluted lands.

Article L. 556-1 and seq. of the French Environment Code aims at facilitating the remediation and the rehabilitation of old industrial sites. In this respect, appropriate measures of soil pollution management must be carried out to preserve public safety and health, as well as the environment, depending on the future use of the land. The use is defined as the function or activity or activities being carried out or planned for a given plot of land or group of plots of land, the soil on these plots of land or the buildings and installations on them.

These provisions clarify the definition of the entity liable in case of pollution by stating a priority order. The law also allows the transfer of cleanup obligations to a third party (as stated below).

2. Is there a definition of contaminated land?

There is no legally binding definition of contaminated land. However, we may gather indications in order to define the French comprehension of contaminated land:

- The Ministry of the Environment published in April 2017 an updated version guidelines for the identification and the management of polluted sites (link to the guidelines in French);
- Several guides drawn up by the Ministry of the Environment, BRGM, Ademe and Ineris have also been published, intended in particular for contractors and project owners (for an example innovative techniques for polluted sites and soils, version of 28 November 2022)

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

As indicated above (see point 1), Article L. 556-1 and seq. of the French Environment Code have recently implemented a specific framework related to polluted soils.

In addition, the legal regime related to classified facilities, imposes to an operator of a classified facility a remediation obligation, which may include the remediation of contaminated land (cf. Articles L. 511-1 subs., L. 512-6-1, L. 512-7-6 and L. 512-12-1 of the French Environment Code).

Moreover, many circulars have been issued by the Ministry of the Environment regarding contaminated land and the liabilities related thereto.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

As beneficiary of the operating permit, the operator is primarily subject to the obligations of rehabilitation and cleanup.

In case of liquidation of a company, the judicial liquidator, who represents the operator during the insolvency procedure, must arrange for a specialist company to prepare an environmental report, taking into account the remediation work that needs to be carried out on the site. This report allows the court, which deals with the liquidation of the company, to take into account the cost of remediation work and make sure that the corresponding amount is secured.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

Article L. 556-3 II of the French Environment Code provides a priority order of persons liable for a contamination incident:

1. The last operator is liable for the cleanup of contaminated land in the case of pollution from a classified facility.

2. When the pollution is caused by waste (or a place of origin other than a classified facility), the waste holder or producer are responsible for the cleanup.

3. The land planner who takes the initiative of changing the way the land will be used may also be required to carry out appropriate soil pollution management measures, depending on the planned future use of the site.

4. On a subsidiary basis, when the person liable for the pollution stated in 1. and 2. cannot be identified, the owner of a contaminated land can be regarded as responsible for the site remediation.

However, the owner could be exempted from remediation obligations if it is proved that he has not been negligent and was not involved in the polluting activity.

In addition, a third party may take charge in the clean-up of a classified facility's site including the remediation of the soil (article L. 512-21 of the French Environment Code): when a classified facility is permanently shut down, this third-party can ask the *Préfet* in the department to carry out soil remediation work instead of the operator, with the agreement of the former operator (see 15.2 for more details).

Law no 2020-1525 introduced the possibility for another third-party (second-tier third-party) to replace the above-mentioned third party for the remediation of the land, with the prior consent from the operator and the initial third-party.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

As stated above, the operator of the plant (who may own or rent it) is liable for cleaning up the contaminated land. Therefore, according to case law, the lessee who has notified the local authorities of its operation of the site (*i.e.* considered as the operator) is liable for its cleanup.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The content of the obligation to clean up the land is set by the local authorities on a case-by-case basis. However, in the case of historical pollution, it is necessary to distinguish between two situations:

- The succession of different operators on the site premises
- The substitution of different operators within the activity

In the case of a succession of operators, cleanup measures ordered by the *Préfet* must be justified and, pursuant to the "polluter pays" principle, the polluter should only have to clean up the pollution directly caused by its activity. In practice, however, local authorities often ask the last operator of the plant to clean up even historical contamination; case law has not been clear on this matter.

In the case of a substitution of operators, (*i.e.* the new operator either buys the former operator's company or asks for a transfer of the classified facility authorization order to his or her name), the former operator "disappears" in the eyes of the administration and the new operator will be liable for decontaminating the site polluted by past activities.

Finally, in certain cases, when the last operator can prove with certainty that the pollution was not caused by its activity, the cleanup of the contaminated land will be carried out with public funds by the French Environment and Energy Management Agency (ADEME) if the actual polluter cannot be found or is not solvent.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

At any time during the operation, rehabilitation may be required by the local authorities. The prescribed measures must be essential for environmental protection. At the end of the operation, the cleanup of the site by the operator is mandatory; sites must be left in a state that does not represent a nuisance or a danger to the environment.

If there is a proven risk of nuisance to the environment, the *Préfet* may order a diagnosis and an evaluation of the nuisance. If the results of such surveys are above the limits cited by the guidelines that were issued by the Ministry of the Environment, the *Préfet* may request a cleanup. During the operation, diagnosis and soil surveys are generally requested when modifications or extensions are declared or in the case of an accident or incident on the facility site.

6. What level of cleanup is required?

During the operation of the site, the level of the cleanup is decided on a case-by-case basis. The purpose of the cleanup is to ensure that there are no more risks or nuisances for human beings or for the environment on the site.

The French Environment Code states that at the end of the operation, the site must be cleaned in order to not endanger the environment, human health, security, sanitation, etc., and to allow the future use of the site, as decided by the mayor and the operator, or the owner of the site if there is no operator.

Should these parties not agree on the level of cleanup, such level of cleanup would have to allow a use of land comparable with the use of the latest operating period, except if such use is not consistent with the use stated by the applicable zoning documents. In such a case, a sensitive use level of remediation may be required.

The operating permit may set forth the terms of future use of the site at the end of the operation by any new facility subject to authorization or registration.

7. Are there different provisions relating to the cleanup of water?

The abovementioned rules applicable to classified facilities apply to water and groundwater cleanup, as well as to soil cleanup.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Ministerial Order of February 2, 1998 imposes to some classified facilities subject to authorization, a concentration limit of 25 mµ/l of perfluorooctanesulfonic acid and its derivatives (PFOS) in the waste water discharged into the natural environment. If an operator exceeds this concentration limit, the administrative authorities may impose remediation measures.

Ministerial Order of June 20, 2023 also imposes to operators of classified facilities subject to an authorization to conduct researches in order to identify and analyze PFAS substances[66] at each point of aqueous discharge from its facility.

Otherwise, there is no other threshold for mandatory remediation of PFAS in soil and groundwater. Administrative authorities may always impose any remediation if it is necessary to protect the environment or public health.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

There are no specific criminal sanctions related to contamination of land. Nevertheless, operating a classified facility without the relevant permit/declaration/registration is a criminal offense, as acts of negligence or noncompliance with safety obligations or with orders issued by local environmental authorities in connection with cleanup are. Penalties are increased if this offences caused substantial damage to soil quality: for example, if an operator did not comply with the cleanup measures prescribed by the administration, and if this non-compliance caused a substantial damage to soil quality, the operator may be punished by an imprisonment of up to three years and a fine of up to EUR 150,000 -EUR 750,000 for companies- (*vs* a two-year imprisonment and a fine of up to EUR 100,000 - EUR 500,000 for companies - without substantial damage to the soil quality).

Pursuant to the law on waste, abandonment and storage of waste contrary to the provisions of the law, as well as disposal or recovery of waste not in compliance with the provisions of the law, are also considered criminal offenses.

There are no specific criminal sanctions related to the sole fact of ownership of contaminated land. However, owners of contaminated land may be subject to administrative obligations if they participate in the operation of the classified facility.

[66] These PFAS substances are the following: heptafluorobutyric acid (PFBA), perfluorovaleric acid (PFPeA), undecafluorohexanoic acid (PFHxA), perfluoroheptanoic acid (PFHpA), pentadecafluorooctanoic acid (PFOA), perfluorononan-1-oic acid (PFNA), nonadecafluorodecanoic acid (PFDA), henicosafluoroundecanoic acid (PFUnDA, PFUnA), tricosafluorododecanoic acid (PFDoDA, PFDoA), pentacosafluorotridecanoic acid (PFTrDA, PFTrA), perfluorobutane sulfonic acid (PFBS), perfluoropentane-1-sulphonic acid (PFPeS), perfluorohexane-1-sulphonic acid (PFHxS), pentadecafluoroheptane-1-sulphonic acid (PFHpS), perfluorooctanesulfonic acid (PFOS), nonadecafluorononane-1-sulfonic acid (PFNS), henicosafluorodecanesulphonic acid (PFDS), perfluoroundecanesulfonic acid (PFUnDS), pentacosafluorododecane-1-sulphonic acid (PFDoDS) and perfluorotridecanesulfonic acid (PFTrDS).

If they do not comply with orders issued by the local authorities regarding, for example, the cleanup of contaminated land, plant managers, company presidents, and eventually, certain company employees, may incur criminal sanctions, including fines of up to EUR 100,000 and up to two years' imprisonment for managers, and up to EUR 500,000 in fines for companies.

Criminal courts may also close down the plant or order the operator to take remedial measures within a limited period of time.

French and foreign companies may be directly sued by the public prosecutor for crimes, misdemeanors and offenses, such as acts of negligence or noncompliance with safety obligations. This regime applies cumulatively with the personal liability of the individuals who committed the offenses.

Penalties include fines (up to five times as those imposed on individuals), limitations on the right to perform certain activities, exclusion from public procurements, temporary or permanent prohibition to conduct certain activities, judicial scrutiny, temporary or permanent cessation of business activity, or dissolution of the company.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

There are administrative and criminal sanctions (see point 9 above), depending on the level of non-compliance.

In the case of non-compliance with an order served by the Préfet, the Préfet may: (i) require the plant operator to deposit an amount of money equal to the cost of the work needed to clean up the land; (ii) take the necessary measures to ensure that the plant complies with the requirements – or cleans up the land – at the operator's expense; or (iii) suspend the operating permit. Such decisions may be challenged before the administrative courts.

11. Can the legal entity be held liable?

Yes, legal entities may incur both administrative and criminal sanctions (other than imprisonment).

12. What authority enforces cleanup?

The Préfet identifies contaminated land (with its specialized DREAL administration) and enforces cleanup.

The mayor may also enforce cleanup when the pollution is caused by waste, unless the pollution by waste is caused by a classified facility (in this case, the Préfet is the competent authority to enforce cleanup).

13. Are there any defenses?

It depends on the situation, since some courts have stated that local authorities can ask the last operator to clean up the land even if the pollution was not caused by its activity. That operator may, in turn, sue the former operators for reimbursement. As indicated above, there is almost a presumption of liability of the last operator. To avoid liability, he or she would have to prove that he or she has performed a totally different activity from the activity that polluted the land and that the pollution does not relate to his or her activity. Such evidence, in practice, is very hard to produce.

14. Can a third party/private party enforce cleanup?

The Préfet remains the sole authority that can enforce cleanup. Nevertheless, pursuant to tort principles, the person or entity that caused the damage is liable to put matters right. Any third party who suffers damage because of contaminated land may bring a court action against the operator of

the land to obtain damages and/or ask it to clean the contaminated land if the absence of such cleanup would cause damage to them. However, third parties may not enforce cleanup.

Besides, pursuant to Law No. 2008-757 on environmental liability, environmental associations and third parties directly affected or likely to be affected by damage or an imminent threat of damage may inform the *Préfet* of any pollution or of an imminent risk of pollution. In addition, they can request the *Préfet* to implement prevention or reparation measures. To be successful, such requests have to be supported by relevant elements.

15. Can third parties claim damages?

Yes (see above). The courts tend to, in the environment field, apply the strict liability principle, based on the so-called "abnormal neighborhood inconvenience." If it is proved that the damage is caused by an installation, its "holder" is liable for repairing such damage. The courts have decided that when the origin of the pollution is hard to determine, it is the defendant who has to prove that the damage could not have been caused by its installation and prove that other causes are likely.

Such tort actions must be made within five years after the discovery of the damage.

Law no 2016-1087 of 8 August 2016 also introduced into French law the compensation of ecological damages. The law defines ecological damage as significant damage to the elements or functions of ecosystems or to the collective benefits derived by man from the environment.

This action is open to any person with standing and interest to act, in particular the State and associations, creating at least five years ago, whose purpose is to protect nature and defend the environment.

Compensation is primarily in kind; if such compensation is not possible, damages are awarded by the court.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

Article L. 514-20 of the French Environment Code sets forth that the seller of land on which a classified installation subject to authorization or registration has been operated must inform the purchaser in writing of that aspect and of any danger to the environment. If the seller is the operator of the site, he or she must also notify the purchaser in writing of any use and storage of chemical or radioactive substances carried out on the site. For Seveso-classified facilities, quarries and waste storage facilities, pre-sale agreements and deeds of sale must also contain a status report on the contamination of the soil.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

The *cadastre* (land registry) does not include a declaration of contaminated land. The *secteurs d'information sur les sols* mentioned below (see 18) are published and annexed to local town planning documents.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

As mentioned above, for Seveso-classified facilities, quarries and waste storage facilities, pre-sale agreements and deeds of sale must contain a status report on the contamination of the soil. Further,

the seller of land on which a classified installation subject to authorization or registration has been operated must inform the purchaser of that aspect and of any danger to the environment (see 16).

In addition, pursuant to Article L. 125-6 of the French Environment Code, the *Préfet* may identify areas on which information on soil condition must be provided (*secteurs d'information sur les sols*), facilitating the accurate identification of such contaminated lands. The existence of known pollution on these lands justifies (in particular, in the case of change of land use) conducting soil studies and applying pollution management measures to preserve the environment as well as ensure public safety and health. However, lands where a classified facility is still in operation are excluded from the scope of information areas, except for classified facilities whose operator has disappeared or is insolvent and for which safety work have been carried out.

In the case of the sale or rental of a land located within such information areas, the seller must provide written information on the soil condition made public through soil studies.

If the seller fails to comply with its information obligation, and if a pollution making the land unsuitable for its use has been identified, within a period of two years following the pollution discovery, the purchaser may ask the judge to grant him or her a partial refund of the purchase price, a cancellation of the sale, or the cleanup of the land at the seller's expense if the cost of such a cleanup is not disproportionate to the purchase price.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

The principle is that the cleanup liability is passed on to the purchaser if the purchaser, replacing the former operator of the plant, performs the same pollution-making activity. If the purchaser only owns the land without operating the plant or operates it for a different activity, liability is not passed on to him or her. Indeed, as indicated above, simply being the owner of contaminated land does not allow the local authorities to order a person to carry out the cleanup. In these cases, the former operator is still liable.

19.2. Contractually?

Article L. 514-20 of the French Environment Code sets forth that the seller of land on which a classified installation subject to authorization or registration has been operated must inform the purchaser of that aspect and of any danger to the environment. If the seller is the operator of the site, he or she must also notify the purchaser in writing of any use and storage of chemical or radioactive substances carried out on the site. For Seveso-classified facilities, quarries and waste storage facilities, pre-sale agreements and deeds of sale must also contain a status report on the contamination of the soil.

If the seller fails to comply with such information obligations, and if a pollution making the land unsuitable for its use has been identified, within a period of two years following the pollution discovery, the purchaser may ask the judge to obtain for him or her a partial refund of the purchase price, a cancellation of the sale, or the cleanup of the land at the seller's expense if the cost of such a cleanup is not disproportionate to the purchase price.

The contractual transfer of environmental risks is a thorny and evolving subject. Indeed, case law has so far remained consistent on the fact that the legal obligation to remediate a site could not be transferred by the site operator to another party. Only the cost of such decontamination could be contractually transferred to the new owner, even though the former site operator will still be legally liable for the site remediation vis-à-vis the French authorities.

However, as noted above (see 4.2) Article L. 512-21 of the French Environment Code now lays down a "*third party pays*" scheme.

Prior to, at the end of the operation of a classified facility, or subsequently, a third party may ask the *Préfet* to bear the operator obligations to carry out remediation works on all or parts of the site, depending on the future use of the land envisaged by the third party and with the prior consent of the last operator.

Under such "*third party pays"* scheme, the whole environmental risk (financial and administrative remediation obligations) can now therefore be transferred to the third party when the site is sold. In this respect, the third party must define, under the control of the *Préfet,* the cleanup measures in accordance with the current soil condition and the contemplated use of the land. The last operator may also decide to keep assuming certain monitoring obligations on the site.

The *Préfet* can refuse the substitution plan submitted by the third party. The substitution plan and the proposed use of the land are regarded as rejected if the *Préfet* fails to respond within a four-month period. If the third-party substitution plan is rejected, the last operator will remain liable for the remediation works.

In addition, the third party has to demonstrate its technical capacity, as well as sufficient means to provide financial guarantees. The amount of the financial guarantees is stated through an order issued by the *Préfet*, for at least the planned duration of remediation works.

However, the last operator remains subsidiarily liable for securing the site (but not for the remediation works) if the third party fails to comply with its obligations.

Also, as noted above (see 4.2), a second-tier third-party may replace the above-mentioned third party for the remediation of the land, with the prior consent that the operator and the initial third-party.

The *Préfet* ensures that the intended use is identical to the one on which he has ruled. If this is the case, the *Préfet* only ensures that this third-party has sufficient technical capacity and financial guarantees to cover the rehabilitation work, and does not control the use of the land.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

As stated above, in case there is a succession of operators on an industrial site, the last operator in a legal succession is liable for cleanup.

Therefore, the purchaser of land in France should carry out in-depth due diligence concerning the history of the site and its current use, prior to any acquisition. Such purchaser should also carefully analyze all environmental reports made available.

Moreover, it is advisable to negotiate appropriate representations and warranties with the vendor and to clearly set out the liability of the vendor for any pollution it has caused or which has been caused by a former activity carried out on the site, not by the vendor, but endorsed by it. However, such contractual arrangements are not binding upon the French state.

Germany

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes. At the federal level there are …

- the Federal Soil Protection Act (*Bundes-Bodenschutzgesetz*, "BBodSchG") of 17 March 1998 (Federal Gazette, Vol. 1, p. 502), as amended, and
- the Federal Ordinance Concerning Soil Protection and Historic Contamination (*Bundes-Bodenschutz- und Altlastenverordnung*, "BBodSchV") of 9 July 2021 (Federal Gazette, Vol. 1, p. 2598, 2716).

In addition, there are soil protection acts at state level.

2. Is there a definition of contaminated land?

There are definitions for "historic contamination" (*Altlasten*):

- "Decommissioned waste disposal sites and other plots of land on which wastes have been treated, stored or disposed of (historic depositions); and
- sites of decommissioned installations and other plots of land on which substances hazardous to the environment have been handled, with the exception of installations the decommissioning of which requires a permit under the Atom Act (historic sites), provided such depositions/sites cause adverse changes to the soil or other dangers for the individual or the general public." (Sec. 2 para. 5 BBodSchG).

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

The Federal Soil Protection Act, State Soil Protection Acts, the Federal Environmental Damages Act, the Federal Closed Circle Economy Act, State Waste Acts, the Federal Water Resources Act and State Water Acts, the Federal Emission Control Act, and General Police Law.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The following parties are primarily responsible for cleanup of contaminated premises: the polluter, his legal successor, the land owner, under certain circumstances even the former land owner (if he or she sold the land after 1 March 1999 and knew or should have known the contamination). The authority has discretion as to which party it requires to take remedial actions. In most cases, it will first try to hold the polluter responsible, but, if it seems more practical to have another party organize the cleanup, e.g., the land owner, it may also require such party to carry out remedial measures. Internally, any party which was held responsible for cleanup by the authorities may file a reimbursement claim against the polluter(s).

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

See at 4.1.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

See at 4.1. Typically, if the polluter cannot be held responsible, the authority will request the owner of the land to take remedial actions, also because the tenant may decide to avoid his responsibility by terminating his or her lease agreement.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes. The liability to clean up includes historic contamination.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The authority will carry out a risk assessment on the basis of threshold values. For some substances and scenarios, such threshold values are listed in the Federal Ordinance Concerning Soil Protection and Historic Contamination (*Bundes-Bodenschutz und Altlastenverordnung,* "BBodSchV"). This Ordinance also sets forth procedural rules for the course of action to be followed by the authority in case of established or suspected soil contamination.

6. What level of cleanup is required?

If possible, contamination shall be removed to save levels. Alternatively, it may be admissible to secure contaminated soil so that it cannot harm health or environment, e.g., by sealing the ground. Certain thresholds are contained in the BBodSchV (see at 5 above). Required levels will vary depending on the envisaged use of the respective land (kindergarten/industrial area).

7. Are there different provisions relating to the cleanup of water?

Yes. There are particular provisions in the respective State Water Acts and accompanying ordinances empowering the competent authorities to require cleanup measures with regard to water.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

No. However, the revised version of the BBodSchV - which will enter into force on 1 August 2023 - provides for "test values" for seven PFAS substances, i.e.

- Perfluorobutanoic acid (PFBA)
- Perfluorohexanoic acid (PFHxA)
- Perfluorooctanoic acid (PFOA)
- Perfluorononanoic acid (PFNA)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluorooctanesulfonic acid (PFOS)

If the test value for one of these substances has been exceeded, the matter must be investigated. However, such exceedance does not trigger per se a mandatory remediation obligation.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

According to Sec. 324a of the Criminal Code, the following course of action is a criminal offense punishable with up to five years' imprisonment or a fine: to wilfully release substances into the soil or to let substances enter the soil in violation of administrative obligations if these lead to a contamination or adverse change of the soil which may damage the health of another person, animals, plants or other things of significant value or if the contamination is of significant extent. If such act was committed negligently, the offense is punishable with up to three years of imprisonment. Owning contaminated land may only be criminally relevant in cases where the owner remains inactive even though he has a duty to actively avoid the release of substances into the soil.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

The authority can impose an administrative fine of up to EUR 50,000 upon a party that is not complying with an administrative order to clean up contaminated land. It may also order a contractor to implement its orders and recover its expenses from the responsible party. If the failure to comply causes extensive or hazardous contamination, the responsible party may be subject to criminal liability (see at 9.).

11. Can the legal entity be held liable?

Yes, if the party responsible for the cleanup (see at. 4) is a legal entity. Note, however, that in Germany criminal penalties cannot be imposed on legal entities, but on natural persons only. In contrast, administrative fines can be imposed on both natural persons and on legal entities (on the latter in certain circumstances).

12. What authority enforces cleanup?

The district authority of the respective state or, in major cities, the municipal administration.

13. Are there any defenses?

The Federal Constitutional Court has ruled that the financial responsibility of the owner of the land may be restricted to the market value of the land after remediation if such owner did not engage in a business which typically involves the risk of soil and groundwater contamination or tolerated such business or if the owner of the land did not know or ought to have known about the contaminations when he acquired it. The consideration depends strongly on the individual case.

14. Can a third party/private party enforce cleanup?

Under Sections 823 and 1004 Civil Code, the owner of the contaminated land and the neighbours, respectively, can require that the polluter removes substances originating from the plot of land of the polluter, provided the use of their own land is adversely affected.

15. Can third parties claim damages?

Depending on the circumstances of the individual case, a third party may be in a position to claim damages, e.g., from the polluter or the owner of the land from which the contamination originated, for impairment of its land, if it can prove that the other party caused the damage negligently or even wilfully or under violation of a law that protects the interests of the claimant.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

There is no such legal requirement under regulatory law. However, under civil law / contracts law a seller may be liable if he or she did not inform the (potential) purchaser about issues with respect to (potential) contamination. This has to be assessed on a case-by-case basis.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No. However, note that contaminated sites may have to be reported to state authorities in order to include such sites into a so-called Contaminated Site Register (*Altlastenkataster*). Details in this regard are regulated on state level.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

See detailed answers below.

19.1. Under the general law?

If the seller was the polluter, he remains liable as polluter under statutory law. If the seller was not the polluter, he or she can, by way of selling the land, pass on to the new owner his or her liability as the owner of land. Under certain circumstances, however, the seller of land remains liable as the "former owner," if he or she knew or ought to have known that the land was contaminated.

19.2. Contractually?

The polluter can agree with a third party that such party indemnifies and/or holds harmless the polluter in case of remedial action requirements. The authority, however, is not bound by such contractual agreements, which leaves the polluter with the risk of insolvency of his contractual partner.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

In most states, it is mandatory to report contamination of soil and/or groundwater to the competent authorities with the possible effect that the authorities will order further investigations and/or cleanup measures. This should be kept in mind when commissioning environmental consultants to undertake a phase II environmental due diligence.

Hungary

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Act LIII of 1995 on the General Rules for the Protection of the Environment (the "**Environment Protection Act**") contains the framework and the basis of Hungarian environmental legislation, including legislation on contaminated land.

The rules on the liability for environmental damages have changed as of 30 April 2007. The new rules apply to incidents of contamination after this date. For incidents that took place prior to this date, however, or as a result of negligence prior to this date, the previous rules apply. The special rules on soil and groundwater contamination are contained in Government Decree No. 219/2004 (VII. 21) on the Protection of Subsurface Water (the "Decree") and Joint KVVM-EüM-FVM Decree No. 6/2009. (IV.14) on the Limit Values for the Protection of Geological Substances and Subsurface Water and on the Measurement of Contaminants (the "Limit Values Decree"). Furthermore, Government Decree No. 219/2004 on the Protection of Groundwater (the "**Groundwater Decree**") also lays down important rules on the protection of groundwater and soil**.**

2. Is there a definition of contaminated land?

Pursuant to Section 4 of the Environment Protection Act, contamination means the status of the environment or any element thereof that can be identified by the contamination level resulting from the pollution of the environment. Such contamination level is established on the basis of contamination limit values. Pursuant to Section 4 of the Environment Protection Act, contamination limit value means the level of pollution of any element of the environment by hazardous substances that, if exceeded, may, on the basis of current scientific knowledge, result in environmental damage or health impairment. The maximum permitted concentration of a hazardous substance is defined by law or, in the absence of a statutory limit value, may be provided in an administrative decision of the environmental protection authority.

Pursuant to Section 3 of the Decree, groundwater damage is any direct or indirect significant, measurable adverse change to the quality or quantity of groundwater or any direct or indirect significant and measurable damage to services provided by the groundwater.

Section 3 also cites that damage refers to any land contamination that creates significant risk of human health being adversely affected as a result of the direct or indirect introduction, in, on or under the land of substances, preparations, organisms or microorganisms if the concentration of the contamination exceeds the threshold value of (B) or (E)

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes, there are. The provisions concerning remediation are set forth in the legislation indicated in Section 1.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Section 101 of the Environment Protection Act contains the "polluter pays" principle. However, according to the current text of Section 102 of the Environment Protection Act, in the absence of evidence to the contrary, the actual owner and the occupier (user) of the real property are jointly and severally liable for activities conducted in that property in violation of environmental laws. The owner may be exempt from this liability if it names the actual user of the land and is able to prove that it is not responsible for the unlawful activities.

Section 21 of the Decree sets out that the above are responsible under administrative law for the cleanup. The current text of the Decree does not define a "primarily responsible" entity. However, it is clear from the wording of the Environment Protection Act that the actual owner and the actual user (if any) are primarily jointly and severally responsible, unless they can prove that someone else caused the contamination. Regarding soil and groundwater contamination, there is an enormous environmental accident case pending before the court that could significantly impact the case law

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

Yes; see point 4.1 above

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

See point 4.1 above.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes, the liability to clean up also covers historical contamination. If no one can be obliged to remediate the contamination, the government itself must handle the environmental damage or environmental hazard

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

A cleanup is required if the so-called pollution limit values to polluting substances are exceeded and, based on a fact-finding report including risk assessment, the authority decides so. Limit values are established in the Limit Values Decree, or, pursuant to authorization in a ministerial decree, by the environmental protection authority in administrative decisions.

6. What level of cleanup is required?

According to Section 101 of the Environment Protection Act, the cleanup must be continued until the original or almost-original status of the environment or of the environmental element is restored or the services provided by the environmental element are restored ("primary cleanup"). In practice, the authority decides on the target limit values (which must be reached) on the basis of risk assessment.

7. Are there different provisions relating to the cleanup of water?

The basic rules are the same. The limit values differ, depending on whether soil or groundwater is contaminated.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

There is no threshold for mandatory remediation of PFAS in soil or groundwater, however regulation on an EU level is in force only for a few PFAS chemicals. The first regulations came into force in 2006 and 2017 respectively, mainly targeting the PFAS chemicals PFOS and PFOA as well as other PFAS that break down into these. In February 2023, a restriction covering about 200 PFAS came into force. This restriction covers PFAS of a specific molecular chain length (C9-14). There are also restriction proposals for the PFAS chemicals PFHxA and PFHxS as well as chemicals that degrade into these. In addition, there is a restriction proposal for all PFAS use in firefighting foams.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

It is a criminal offense to contaminate land. However, it is not a criminal offense to own contaminated land. Act C of 2012 on the Criminal Code (the "**Criminal Code**") contains several specific provisions concerning contamination:

- Damaging the Environment (Section 241 of the Criminal Code)

Any individual commits a crime if he or she willfully: (i) endangers the soil, air, water, flora or fauna, or any element thereof through significant pollution or otherwise; (ii) damages the soil, air, water, flora or fauna, or any element thereof through significant pollution or otherwise, to such an extent that the natural or previous state of the environment can be restored only through intervention; or (iii) damages the soil, air, water, flora or fauna, or any element thereof through a significant pollution or otherwise, to such an extent that the natural or previous state of the environment cannot be restored. The punishment can be imprisonment for: (i) up to three years; (ii) up to five years; (iii) two to eight years; or (iv) up to three years, respectively.

Any individual who negligently engages in the above conduct may be punished with imprisonment for up to one year in the case of (i) and (iv), up to two years in the case of (ii) or up to three years in the case of (iii).

The perpetrator shall not be liable to punishment in cases specified in paragraph (1) a) and in the first and second parts of paragraph (2) and his punishment may be reduced with limitation in the case specified in paragraph (1) b), if he averts the danger or environmental damage caused by the criminal offence and restores the original condition of the damaged environment before the first instance conclusive decision is passed.

- Damaging Nature (Section 242 - 243 of the Criminal Code)

Section 242

Any individual who willfully and unlawfully obtains, keeps, markets, imports, exports, transits, trades with, endangers, damages or destroys: (i) a highly protected living organism; (ii) a protected living organism; (iii) a living organism covered by the EU CITES Regulation, commits a crime and may be punished with imprisonment for up to three years. The penalty shall be imprisonment between one to five years if the damage caused to the natural environment results in the destruction of the species of living organisms, such as when:

- highly protected living organisms or protected living organisms will be destroyed, and the aggregate value of such destroyed species of living organisms, when expressed in monetary terms, is equal to double of the highest amount determined by specific other legislation for such highly protected living organisms under special protection; or

- it threatens the survival of the living organisms covered by the EU CITES Regulation.

A person who commits the criminal offence of damaging natural values by using poison or placing bait suitable for killing an animal, thus endangering the life of more than one animal shall be punished under paragraph (2).

Section 243

Any individual who unlawfully and significantly alters Natura 2000 areas, protected caves, protected sites and the population or natural habitat of protected living organisms, commits a crime that is punishable with imprisonment for up to three years. The penalty shall be imprisonment between one and five years if the damage caused to the natural environment results in the significant deterioration or destruction of Natura 2000 areas, protected caves, protected sites or the population or natural habitat of protected living organisms. Any individual who negligently commits the above may be punished with imprisonment for up to two years.

- Misappropriation of Radioactive Materials (Section 250 of the Criminal Code)

Any individual who, without notification or by exceeding the scope of the authorization: (i) produces, stores, disposes of or transports hazardous radioactive substances; (ii) acquires, possesses, manages, distributes, processes or otherwise uses hazardous radioactive substances, or transfers such to an unauthorized person, treats, imports or exports such materials or transports them in transit through the territory of the country, commits a crime and may be punished with imprisonment between one to five years. If the abovementioned crime is committed in criminal association with accomplices, the punishment shall be imprisonment between two to eight years. Any individual who engages in preparations for the above crime may be punished with imprisonment for up to three years. Any individual who commits a crime defined under (i) or (ii) by way of negligence may be punished for misdemeanour with imprisonment for up to two years.

- Illegal Operation of Nuclear Installations (Section 251 of the Criminal Code) - Crimes in Connection with Nuclear Energy (Section 252 of the Criminal Code)

- Violating the Rules on Waste Management (Section 248 of the Criminal Code)

An individual commits a crime and may be punished with imprisonment for up to three years if he or she deposits waste at a location that is not designated for this purpose by the competent authority, or treats waste without the appropriate permit or conducts any other unlawful activity involving waste. If the crime involves hazardous waste, the punishment can be imprisonment for up to five years.

Any individual who negligently commits the above may be punished with imprisonment for up to two years.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

No, but an administrative fine can be imposed. In addition, based on the Groundwater Decree the competent authority may restrict the use of the land concerned if the user fails to fulfil his/her cleanup obligations. Furthermore, if the contamination was the result of an activity subject to permit(s), the competent authority may restrict, suspend or withdraw such permit(s) if the user of the environment fails to clean up the contaminated land.

11. Can the legal entity be held liable?

Yes, the legal entity can be held liable.

12. What authority enforces cleanup?

The competent regional environmental authority enforces cleanup. There are 10 regional authorities in Hungary and the National Environmental Inspectorate is the authority of second instance.

13. Are there any defenses?

According to Section 102/A of the Environment Protection Act, the person liable for the cleanup shall be exempted from administrative liability if he or she is able to prove that the threat to the environment or the environmental damage:

- was caused by an act of armed conflict, war, civil war, armed hostilities, insurrection or natural disaster; or
- is the direct result of the enforcement of a final and compulsory resolution of an authority or court.

14. Can a third party/private party enforce cleanup?

Civil law instruments may also be used for environmental purposes; however, they are not frequently applied to enforce land contamination cleanup, but rather, they are used to stop or prevent noise or air pollution. Theoretically, the following civil law claims may form a legal basis of enforcing a cleanup: protection of persons (the right of individuals for a healthy environment) under civil law; neighbors' rights, i.e., the right of neighbors for the undisturbed use of their property; nuisance (the protection of possessors), because contamination or pollution originating from another site is considered undue disturbance of possession; and torts, which are actionable *per se*.

15. Can third parties claim damages?

Yes. Any person whose health, corporal integrity or property is damaged by an unlawful act or omission can claim damages. An unlawful act or omission can be, among other things, an act in violation of or the omission of activities prescribed by environmental laws. Therefore, any person suffering damage as a result of unlawful contamination may claim damages from the polluter.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No, but it is highly recommended to do so in order to avoid liability.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Only the lasting environmental damages, established by a final administrative or judicial decision, have to be registered in the Land Registry. *FVM Decree No.109/1999. (XII.29.)*

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No, but it is highly recommended to do so in certain cases, in order to avoid liability.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Pursuant to the Environment Protection Act, the actual owner of the land is liable for remedying its contaminated land (see Section 4.1 above). By acquiring ownership of a land, the new owner will take over the liability for the possible contamination. However, the purchaser may exercise warranty claims against the seller if it turns out that the purchased land was contaminated, and, ultimately, may also rescind the sale and purchase contract under certain conditions. If the court accepts the warranty claims, the seller will have to clean up the land. In addition, according to the Hungarian Civil Code, in the course of exercising civil rights and fulfilling obligations, all parties have to act in the manner required by good faith and honesty, and they are obliged to cooperate with each other. Before entering into a sale and purchase agreement, the seller is obliged to inform the buyer about the essential characteristics of, and all important requirements pertaining to, the land, which includes possible contamination and cleanup obligations as well. If the seller does not inform the buyer of the essential characteristics of the land, the court considers the omission of the seller as a breach of contract and may oblige the seller to pay damages, or, based on the omission or misinformation and the other facts of the case, it may establish the invalidity of the agreement. The existence of permanent environmental damage may be registered with the Land Registry. (Note that the concept of environmental damage differs from that of environmental contamination. Environmental damage means the change in, or the pollution of, the environment to such an extent that its natural or previous state [quality] can be restored only through intervention or cannot be restored at all.) In this case, the purchaser cannot invoke the above arguments and must perform the cleanup tasks, because it was or could have been aware of the contamination from the public registry.

19.2. Contractually?

Under the regime applicable for the contamination that took place before 30 April 2007, the Decree expressly enabled the contractual takeover of the liability for the cleanup, but the authorities were not obliged to accept such takeover. This express reference was deleted from the Decree with regard to contaminations that took place on or after 30 April 2007, although nothing precludes the authorities from accepting such a contractual arrangement.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

There is public access to the real estate registry in which the fact, extent and nature of any permanent environmental damage established by a definitive official decision or court ruling are also registered.

Italy

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

All statutes relating to land contamination are in the Legislative Decree no. 152 of 3 April 2006, i.e., the Italian Environmental Code.

2. Is there a definition of contaminated land?

Article 240.1, lett. e), of the Environmental Code states that a land is considered "contaminated" when one of the risk-concentration values (polluting capability and risk analysis, so-called *concentrazioni soglia di rischio* ("**CSR**")) of polluting substances in the soil, subsoil, groundwater or superficial waters (determined on the basis of the risk analysis procedure set out in in the Annex I to the Environmental Code) exceeds the acceptable limits of concentration.

Under Article 240.1, lett. d) of the Environmental Code, a land is considered "potentially contaminated" when one or more concentration values of pollutants detected in the environmental matrices are higher than the contamination-concentration values (so-called *concentrazioni soglia di contaminazione* ("**CSC**"), pending the completion of site-specific characterisation and health and environmental risk analysis operations, which allow the presence of the eventual contamination on the basis of the CSR.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Article 242 of the Environmental Code provides for a special cleanup procedure to be followed in case of contamination, or in case of actual and current risk of contamination, in accordance with the EU polluter pays principle.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Pursuant to Article 242 of the Environmental Code, and in line with the EU "polluter pays" principle, the polluter is primarily responsible for the cleanup.

However, there is a line of case law which identifies the "polluter" not only with the operator who caused the pollution, but also with the person who (even passively) aggravates said pollution. Therefore, at the same time, a person could be identified as the non-polluting owner with reference to plot of land A, and as the polluter of plot of land B or of the aquifer/groundwater in case its inaction has not prevented the spreading of the pollution.

Moreover, Article 245 of the Environmental Code provides that the owner (or the operator) of the site which is not responsible for the contamination and detects the exceedance or the actual and concrete risk of CSC exceedance, must immediately take the appropriate preventive measures and report it to the competent authorities. Non-polluting persons are not obliged to carry out remediation, but failure to take such preventive measures and to report may originate liability e.g. for damages, in case of dynamic contamination and worsening of the situation due to the non-adoption of preventive measures.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

Pursuant to Article 250 of the Environmental Code, in case the polluter cannot be identified, or in case the polluter does not carry out the cleanup activities, the remediation is performed by the competent local authority (i.e. Municipality or, in the alternative, the Region). In this case, pursuant to Art. 253 of the Environmental Code, the interested land will then be subject to a lien ('*onere reale*') aimed at securing the remediation costs. The non-polluting owner may be obliged to compensate such costs within the limits of the market value of the land upon completion of the cleanup works. The lien is also assisted by a special privilege on real estate ('*privilegio speciale immobiliare*'), which would legitimate the authority to effect an expropriation and, then, to be high ranking preferred creditors upon such expropriation. In other words, in this scenario, the authorities could force the sale of the site and they would rank high among the creditors in the distribution of the proceeds. The lien will be indicated in the public land register and certificates in order for it to be detected and known by third parties.

In case the non-polluting owner carries out the cleanup procedures on a voluntary basis, pursuant to Art. 253, the owner would be entitled to claim against the polluter for the costs incurred and any greater damage suffered. The Council of State confirmed the effectiveness of the right of recourse where the non-polluting owner completed the cleanup in compliance with applicable laws and rules (judgement no 5542 of 26 July 2021).

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

It should be noted, however, that the authorities often and at first instance, try and consider the person who operates the activities on the land (i.e., the operator) as responsible. The operator may nevertheless prove that someone else caused the contamination e.g. by demonstrating that the polluting substances found are not, or have not been, used in its operations. This may be difficult to prove, particularly from a technical point of view, especially if the operator has managed those pollutants.

The European Court of Justice, in a landmark case related to an Italian clean-up procedure (9 March 2010, Case C-378/08), upheld such approach of the Italian authorities (*"Directive 2004/35 does not preclude national legislation that allows the competent authority acting within the framework of the directive to operate on the presumption, also in cases involving diffuse pollution, that there is a causal link between operators and the pollution found on account of the fact that the operators' installations are located close to the polluted area*"). This could make the position of the owner and occupier weaker.

According to recent Italian administrative case law, the owner has the obligation to start remediation proceedings only in case its culpable causal contribution is proved. In other words, according to the EU "polluter pays" principle, remediation measures cannot be imposed on the owner who is not responsible for the pollution (see, e.g. Council of State, judgement no. 1630 of 7 March 2022).

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

According to the EU "polluter pays" principle, the liability to cleanup does not include historical contamination caused by other operators. Nevertheless, sometimes it may be really difficult demonstrating that the contamination was not caused - or worsened - by the current operator of the land. As mentioned in point 4.3, if the polluter cannot be identified and the competent authority proceeds to cleanup the land, the relative costs would be recovered by the authorities by enforcing the lien on the land. The owner would bear the cleanup expenses up to the value of the site after the remediation. Finally, as mentioned in point 4.1, the non-polluting owner could be viewed as a polluter, if it somehow contributed to the spread or worsening of the pollution, and is, in any case, far from being exempt from any obligation in case of pollution. Indeed, pursuant to the Environmental Code, both the polluter and the owner-occupier of the site where the pollution took place/was discovered are

subject to obligations of reporting pollution to the competent authorities and implementing preventive measures to avoid the worsening of the situation.

Furthermore, in case of historical contamination, if contamination occurred prior to the entry into force of the Environment Code, the obligation to carry out the cleanup pursuant to Article 242 applies (e.g. Regional Administrative Court of Lombardy, ruling no. 776 of 2 August 2022).

The objective of the abovementioned provisions is not to sanction a past conduct of pollution, but rather to impose a remedy to the (enduring) condition of contamination, so that the time on which the contamination occurred is irrelevant.

Lastly, the Italian National Recovery and Resilience Plan ('PNRR') established a EUR 500 million fund for the remediation of so-called 'orphan sites' (i.e. contaminated sites that have not been cleaned up by responsible persons or by the owners of the land, because they are unknown or failed to comply). The goal of the PNRR is to clean up 70 per cent of orphan sites by 2026. To this end, the Ministry of the Environment and the competent territorial authorities draw up an Action Plan that identifies the areas to be cleaned up, the measures to be implemented and the resources to be used.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Article 242 of the Environmental Code states the need of verifying first the statutory parameters, i.e., the pollution concentration thresholds (*concentrazione soglia di contaminazione* or CSC) and, upon completion of the site specific risk assessment, the pollution risk thresholds (*concentrazione soglia di rischio* or CSR). It is important to note that, in order for the cleanup obligation to arise, the risks to the population posed by the eventual exceedance of the pollution thresholds are also considered.

In order to verify and assess whether cleanup is required, firstly, the polluter carries out a preliminary analysis to verify the status of CSC thresholds. If the analysis reveals that the CSC thresholds are exceeded, a specific risk assessment will be carried out to ascertain the CSR thresholds. If the CSR thresholds are exceeded, a cleanup procedure will need to be started.

6. What level of cleanup is required?

Cleanup is required if one or more of the concentration values of polluting substances in the soil, subsoil, groundwater or superficial waters exceeds the acceptable limits of concentration.

Each polluting substance can be present on the site up to a certain level. However, if any polluting substance exceeds the acceptable limits, then the cleanup procedure must be carried out. Note that the acceptable level for soil varies also depending on the intended use of the site (i.e., residential or industrial).

7. Are there different provisions relating to the cleanup of water?

The Environmental Code sets forth a specific regulation for water issues (Articles 73 and *seq*.). Nevertheless, it must be noted that the water cleaning procedure is, so to speak, "attracted" by the land contamination regulation when it refers to underground water, by means of Article 243, which sets forth the burden of underwater cleaning when a land emergency cleaning procedure is carried out.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Yes, the Italian Government, enacting Directive 2020/2184/EU on the quality of water intended for human consumption, adopted Legislative Decree no. 18/2023, introducing specific thresholds for PFAS.

More specifically, Annex I to the Legislative Decree no. 18/2023 sets a threshold for "total PFAS", intended as the totality of per- and polyfluoroalkyl substances, as well as for the "sum of PFAS", intended as a subset of "total PFAS" substances containing a Perfluoroalkyl Group with three or more atoms of carbon or a Perfluoroalkyl Group with two or more carbon atoms. As for the PFAS substances considered, these are currently listed in Annex III, section B, point 3 of Legislative Decree no. 18/2023.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Article 257 of The Environmental Code states that anyone who contaminates land, subsoil, surface water or groundwater, or causes a current and real danger of contamination without performing the necessary remediation activities, commits a criminal offense.

Furthermore, Law no. 68/2015 amended the Criminal Code, introducing a specific Section dedicated to environmental crimes. Some of these crimes are strictly related to pollution, and specifically:

(i) the offense of environmental pollution, meaning the significant and measurable impairment or deterioration of the previous state: (i) of the water or air, or extended or significant portions of the soil or subsoil; or (ii) of an ecosystem, biodiversity (also agrarian) flora or fauna. In this case, sanctions from EUR 10.000 to EUR 100.000 and imprisonment from 2 to 6 years will be imposed. These criminal penalties are increased in the case of death or injury as a consequence of the crime of environmental pollution (see Art. 452-bis and 452-ter of the Criminal Code).

(ii) the offense of environmental disaster, which occurs when there is: (i) an irreversible alteration to the equilibrium of an ecosystem; (ii) an alteration to the equilibrium of an ecosystem whose elimination is particularly costly and achievable only with exceptional measures; or (iii) an offense against public safety due to the severity of the offence in terms of the extent of the impairment or the damage caused or the number of persons injured or exposed to danger. In this case, penal sanctions of imprisonment will be imposed for five to fifteen years (see Art. 452-quater of the Criminal Code).

(iii) The Criminal Code also punishes cases where there is only the danger of environmental pollution or an environmental disaster, even if these events do not occur. Penalties are reduced accordingly in such cases. The reduction also applies when the offences are committed negligently and not wilfully. On the other hand, an increase in penalty is provided for if the pollution or environmental disaster occurs in protected areas.

(iv) the offense of impeding controls, that includes denying or hindering access to places, or artificially changing the condition of premises, to thwart or circumvent the supervision and control of environmental and occupational health and safety, or to affect outcomes. In this case, imprisonment from six months to three years will be imposed (see Art. 452-septies of the Criminal Code)

(v) the offense of failure to decontaminate, as a breach of the commitments of remediation, restoration and recovery of locations; this obligation of intervention can be derived directly

from the law, or the order of a court or public authority. In this case, imprisonment from one to four years and a fine ranging from EUR 20.000 to EUR 80.000 will be imposed (see Art. 452-terdecies of the Criminal Code).

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Article 257 of the Environmental Code establishes that anyone who contaminates land, subsoil, surface water or groundwater for exceedance of CSR thresholds and fails to comply with relevant cleanup obligations, may be punished with imprisonment from six months to one year and a pecuniary fine ranging from EUR 2,600 to EUR 26,000.

In case contamination is caused by dangerous substances, the sanctions are higher. Indeed, the responsible person may be punished with imprisonment from one year to two years and a pecuniary fine ranging from EUR 5,200 to EUR 52,000.

In addition, as reported in answer 9 above, failure to comply with the obligation to decontaminate established under the law, or the order of a court, or the order of a public authority, is punished by Art. 452-terdecies of the Criminal Code with the imprisonment from one to four years and a fine ranging between EUR 20,000 and EUR 80,000.

The polluter will be exempt from penalties or the penalty may be reduced if he or she carries out the cleanup of the contaminated land. This provision aims to encourage polluters to remedy their actions in order to facilitate the cleanup of the site. It applies not only to the existing incident of contamination (as a kind of amnesty), but also to contamination that may occur in the future.

Depending on the actual circumstances and charges, the polluter may be exempted from penalties and the cleanup operation required for that exemption may not amount to a complete cleanup of the affected area. In the case of industrial sites that are still in operation, it is acceptable for a cleanup project to provide only partial remedial action in the form of a plan to make the site environmentally secure.

11. Can the legal entity be held liable?

Under certain circumstances, legal entities can be held liable in case of non-compliance with the requirement to cleanup polluted sites.

Article 25-*undecies* of Legislative Decree 231/2001 (which regulates the liability of companies for administrative offences related to crimes) contains a list of environmental offences that may be committed by companies. The offence provided for in Article 257 of the Environmental Code is listed therein and an administrative fine up to EUR 387,250.00 may be applied to the company.

Up to now the offense of failure to decontaminate provided for in Article 452-terdecies of the Criminal Code is not included in the catalogue and, as a consequence, companies cannot be held liable for such offence. On the contrary, the offences of environmental pollution and environmental disaster (provided for in Articles 452-bis and 452-quarter of the Criminal Code) are included.

12. What authority enforces cleanup?

This is to be assessed on a case-by-case base, since the cleanup may be enforced by the Ministry of Environment, Region, the Province or the Municipality in which the pollution occurred, depending on the actual circumstances and the different regional laws.

13. Are there any defenses?

Defenses may be brought before the civil, criminal and/or administrative courts, as the case may be. In any case, any order imposing a remediation activity can be challenged before administrative courts, within 60 days from its notification.

14. Can a third party/private party enforce cleanup?

Third parties cannot directly enforce a cleanup procedure, however, they can inform the competent authorities that pollution has occurred in a particular site. That would trigger an investigation that might lead, on the one hand, to criminal consequences for the polluter, and on the other hand to the order served to the polluter/owner (as the case may be) to carry out remedial activities on the polluted area.

15. Can third parties claim damages?

In the event that third parties have been damaged by the contamination of the land, they can sue the responsible party before civil courts. Industrial activities may be easily considered dangerous activities for the purposes of Article 2050 of the Italian Civil Code (regulating liability for engaging in dangerous activities); in such cases, the polluter is subject to strict liability, i.e., the polluter has to prove that it has exhausted available technical measures to prevent any accident and damage.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

There is the obligation to promptly notify the competent authorities of (i) any accident that caused contamination or risk of contamination of soil and/or ground water, as well as (ii) any discovery of historical contamination that may cause further environmental deterioration. There is also the obligation to follow specific procedures to conduct and complete the cleanup works pursuant to specific laws and regulations.

There is also a general duty, arising from the general principle of good faith, to inform the other party about contaminating activities. Thus, the contracting parties have to behave fairly and should not hide material or essential information. The violation of the principle of good faith, if proven, may lead to compensation for damages and, in some cases, could also adversely affect the validity and enforceability of the contract.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Local authorities are required to keep a register of all contaminated sites, including details of the involved and responsible persons.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Environmental laws do not expressly address this issue, and, in general terms, these liabilities cannot be transferred. In other words, the primary cleanup liability remains with the polluter. However, the lien

put on the real estate in order to guarantee the cleanup procedures stays with the land and will not be released until the cleanup is completed by any interested party (including also the purchaser, who could complete the cleanup on a "voluntary" basis).

19.2. Contractually?

The parties to a transaction can allocate the economic burden of the environmental liability, but not the liability vis-à-vis the authorities, which is imposed by the law.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

As said above, the purchaser of a contaminated land could be subject to certain obligations of reporting pollution to authorities and of implementing preventive measures to avoid worsening the situation.

However, the Italian case law has been very consistent in excluding the liability of the non-polluting owner that did not notify the contamination, provided that it was caused and is attributable to a third party. In judgment no. 2686 of 20 November 2019, the Court of Cassation stated that: "*The offence of failure to notify the competent authorities, provided for in the case of imminent threat of environmental damage pursuant to Articles 242 and 257 of Legislative Decree No 152 of 3 April 2006, is on to the person responsible for the potentially polluting event and not to the person who, being the owner of the land, did not cause it*".

Moreover, the civil case law has recently further clarified that "the non-polluting owner is only required to comply with the reporting obligation provided for by art. 245 of the Environmental Code when it discovers the actual or potential contamination of the land. As for the duty to act with respect to the safety, remediation and environmental restoration measures, such duty is limited to the adoption of the necessary preventive measures to address the potential occurrence of environmental and health hazards" (see Court of Cassation, judgement no. 3077 of 1 February 2023).

It is also worth noting that article 304 of the Environmental Code may also apply towards the non-polluting owner that failed to notify the authority in case of an imminent threat of environmental damage. In particular, under art. 304, the operator must (i) take, within twenty-four hours and at his own expense, the necessary preventive and safety measures, and (ii) notify the competent authorities thereof. If the operator fails to take action and notify, it could be applied an administrative pecuniary fine ranging from EUR 1.000,00 to EUR 3.000,00 for each day of delay in reporting. It cannot be excluded that regulators may try and impose these sanctions also to non-polluting owner or operator.

Kazakhstan

Nurgul Abdreyeva

by Baker & McKenzie, Almaty

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

The main statute regulating environment protection matters, including the land contamination, is the Ecological Code of the Republic of Kazakhstan dated 2 January 2021 (the "**Ecological Code**"). The Ecological Code, among other things, regulates such matters as: determination as to what should be considered damage to the environment, including the land, the main principle "polluter pays", remediation, conditions for imposing liability in connection with contamination, etc.

In addition, the Land Code of the Republic of Kazakhstan dated 20 June 2003 (the "**Land Code**") establishes main principles of land protection, obligations of land owners and users in the land protection area, state control over land use and protection, etc.

2. Is there a definition of contaminated land?

Under the Ecological Code, damage to lands is defined as:

- Contamination of lands as the result of direct or indirect penetration of pollutants, organisms or microorganisms that create a risk of damage to population's health;
- Damage in the form of destruction of soil or other consequences which result in degradation or exhaustion of soil.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

The Ecological Code is the main law regulating treatment of contaminated land.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

An entity primarily responsible for the cleanup is the polluter. Imposition of administrative or criminal liability for ecological damage does not release a polluter from the obligation to remediate the damaged environment.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The Ecological Code established a number of rules on this question, which can be summarized as follows:

- If the polluter ceased to exist, liability should pass to its successor;
- If the successor cannot be found or ceased to exist, the liability should be imposed on an entity which was an owner or land user of a land plot where contamination has occurred during the damaging activity (if the activity had a lasting character, when the relevant activity was completed);

- If the above entities cannot be found or ceased to exist, the liability should be imposed on a current owner or land user of the land plot (if it is proven that such current owner or land user knew about the ecological damage at the moment of the acquisition);
- If all above listed entities cannot be found within three years after the damage, the state should rehabilitate the damaged land.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

If both owner and occupier are polluters, they should bear joint liability for the ecological damage. The liability is allocated on a case by case basis depending on specific circumstances of a case.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The Ecological Code defines historical contamination as accumulated ecological damage which occurred as the result of previous activity (including a complex of various types of activities) remediation of which has not been conducted in part or in full.

Under the general rule, remediation of historical contamination should be financed from the state budget.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The Ecological Code provides that pollution of the environment means presence, in air, waters, land and soil of pollutants, in volumes exceeding limits of ecological standards approved by the state. Typically, the ecological standards are approved for specific dangerous substances and pollutants.

Further, under the Ecological Code, all industrial facilities/activities, depending on the level of impact on the environment, are divided into four categories. Activities that have the highest level of environmental impact (e.g., certain types of power production, manufacture and processing of metals, chemical industry, etc.) are included in category I. Activities with the lowest level of environmental impact are included in category IV.

All individuals and legal entities that produce a negative impact on the environment in the course of operating facilities of categories I and II must obtain an ecological permit from the regulator, its local subdivisions or local executive authorities (depending on the type of relevant facilities and area of activities). Under the Ecological Code, there are two types of environmental permits, as follows:

(a) Ecological permits for impact

(b) Complex ecological permits

Complex ecological permits are mandatory for facilities of category I and could be issued subject to compliance with the best environmental techniques. Ecological permits for impact are mandatory for facilities of category II and are issued for a period until the relevant technologies used by a holder change, but not more than 10 years.

Ecological permits include, among other things, limits of emissions that could be made by the relevant holders. Typically, when issuing an ecological permit, the authorities should take into account the ecological standards for the relevant dangerous substances and pollutants.

Emissions within limits set forth by ecological permits are considered permitted limits and do not serve as the ground for cleanup obligations and related liability.

6. What level of cleanup is required?

Under the Ecological Code, the remediation (cleanup) is defined as a complex of measures aimed at liquidation of ecological damage by restoring, regeneration of an environment component to which the damage has been caused or, if the damage cannot be liquidated, replacement of the relevant environment component.

General standards of the remediation are the following:

- The damaged environment component should be restored to its basic condition;
- If the damage cannot be liquidated, a replacement should be conducted in the form of additional improvements created for protected fauna and its areals or other environment component with identical or similar ecosystem within the damaged plot;
- As the starting point, an entity responsible for ecological damage must conduct a direct remediation in the form of restoring damaged environment components or creating conditions for their natural restoration to the level of their basic condition;
- If direct remediation is not possible, an entity responsible for ecological damage must conduct an alternative remediation. Such alternative remediation may include measures aimed at protection and improvement of environment within the damaged territory; creation of conditions for restoring similar environment components; or other measures aimed at the environment protection at a territory to the extent possible close to the damaged area;
- The remediation should be conducted on the basis of a remediation program that should be approved with the environment protection authorities.

7. Are there different provisions relating to the cleanup of water?

General provisions related to the remediation are the same for all types of pollution. Specific remediation measures may of course differ depending on an environment component to which a damage was caused. Typically, such specific measures are reflected in the remediation program.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

There is no specific regulation for PFAS. However, the list of hazardous substances to which ecological regulation applies includes fluorine and its combinations.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Contamination of land may be subject to criminal liability. In particular, criminal liability could be imposed for contamination of land by industrial, household and other discharges and wastes, as well as toxication, pollution and other deterioration of land by harmful products of industrial and other activity as the result of breach of requirements applicable to treatment of pesticides, toxic chemicals, fertilizers, stimulators and other dangerous chemical, radio active or biological substances, if such actions have resulted or could have resulted in material damage or have caused harm to people health.

Penalties include fines, corrective works, public works, restriction of freedom, prohibition to occupy certain positions or engage in certain activities, imprisonment. Level of sanctions depend on consequences of the relevant offence.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Yes, if it falls under features described in the response to question 9 above.

11. Can the legal entity be held liable?

Legal entities can be held liable for civil damages and administrative offences. In case of criminal liability, only individuals can be held liable.

12. What authority enforces cleanup?

The Ministry of Ecology and Natural Resources (the "**Ecology Ministry**") is a primary state authority regulating cleanup matters. Depending on circumstances, other state authorities may be involved.

13. Are there any defenses?

Available defenses depend on specific circumstances of a case. For example, contamination in the course of liquidation of emergency situations should not give rise to the liability.

14. Can a third party/private party enforce cleanup?

Third/private parties cannot directly enforce cleanup obligations of other entities. However, they can apply to the regulator with requests to take measures with regard to damage to the environment, as well as to apply to courts if their rights have been damaged by breaches of ecological laws.

15. Can third parties claim damages?

Third parties can claim damages only if ecological breaches have caused damage to their property (e.g. destruction of their land plots, etc.).

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

Under the Ecological Code, the Ecology Ministry shall organize a conduct of a specialized register on emissions and pollutants transfer. For the purposes of this register, entities included into a special list (the list includes types of enterprises that make most dangerous emissions) must submit regular annual reports which, among other things, should include information on all emissions made during the reported period.

The laws do not regulate a question as to which information about contaminating activities should be included into a sale contract.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

There is no requirement to register a declaration of contaminated land in the Land Registry. However, under the Ecological Code, an entity that caused damage to the environment (including the land) must immediately (within 2 hours) notify the regulator about potential contamination, its preliminary assessment and scale.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

There is no express obligation to conduct investigations of potential contamination before the sale of a property.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

Generally, the statutory responsibility for cleanup cannot be passed.

19.1. Under the general law?

The laws do not provide for the possibility to pass the responsibility for the cleanup.

19.2. Contractually?

As noted above, the laws do not provide for the possibility to pass the responsibility for the cleanup. However, the parties can contractually agree that one party will compensate to the other party expenses spent for the cleanup purposes.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

N/A

Luxembourg

by Baker & McKenzie, Luxembourg

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

To the extent that land contamination has not been subject to specific protection measures at the European level, Luxembourg does not, as of today, of a specific regulation on land contamination.

However, certain aspects related to the protection of soil are scattered throughout various laws and regulations including, without limitation:

(a) **The law of 31 May 1999 establishing a Fund for Environmental Protection;**

(b) **The law of 10 June 1999 relating to Classified Establishments;**

(c) **The law of 20th April 2009 on Environmental Liability with regard to the Prevention and Remediation of Environmental Damage;**

(d) **The law of 21 March 2012 on Waste Management**, amending 1. the Act of 31 May 1999 establishing a fund for environmental protection; 2. the Law of 25 March 2005 on the operation and financing of the *SuperDrecksKëscht* action; 3. the Law of 19 December 2008 (a) on batteries and accumulators and waste batteries and accumulators (b) amending the amended Act of 17 June 1994 on waste prevention and management; 4. The Law of 24 May 2011 on services in the internal market;

(e) **The law of 9 May 2014 relating to Industrial Emissions;**

(f) **The law of 18 July 2018 on the protection of Nature and Natural Resources Protection;**

(g) **The law of 15 May 2018 on Environmental Impact Assessment.**

It is further to be noted that a draft Law on Soil Protection and Management of Polluted Sites (the "**Draft Contaminated Land Law**") is since 2018 under discussion by the Luxembourg Government (https://environnement.public.lu/content/dam/environnement/documents/natur/sol/future-loi-sols/20180129-communique-buedemschutzgesetz-final.pdf).

The Draft Law on Contaminated Land shall amend certain of the laws above mentioned (i.e. **1**. the amended Act of 10 June 1999 on classified establishments, **2.** the amended law of 9 May 2014 on industrial emissions, **3.** the amended law of 21 March 2012 on waste management, **4.** the amended Act of 31 May 1999 establishing a fund for environmental protection and **5**. Amended Act of 20 April 2009 on environmental liability with regard to the prevention and remedying of environmental damage) and create a single Luxembourg framework on contaminated land.

2. Is there a definition of contaminated land?

As of today and according to the provisions of the Law of 10th June 1999 relating to Classified Establishments, a definition of "pollution" may be found under article 2.3: "**Pollution**" *means the direct or indirect introduction by human activity of substances, vibration, heat or noise into the air, water or soil which are likely to affect human health or the quality of the environment, cause damage to tangible property, damage or impede the enjoyment of the environment or other legitimate uses of the environment.*

The Draft Law on Contaminated Land includes a specific definition of "***Soil pollution***", *which means* "the *presence on* or *in the* soil *of pollutants caused by human activity that are harmful or may be detrimental to soil quality".*

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes. The following laws govern, in particular, the cleanup and/or remediation actions with regard to contaminated land:

3.1. The law of 20th April 2009 on Environmental Liability with regard to the Prevention and Remediation of Environmental Damage (the "**Law of 2009**").

First of all, it is to be noted that the Law of 2009 applies only to the environmental damages caused by the professional activities set forth under Schedule III to the Law, which includes, without limitation:

(a) the operation of facilities subject to the provisions of the 9 May 2014 relating to Industrial Emissions (the "**Law of 2014**"), to the exception of facilities or part of the facilities uses for research, development and testing of new products and processes;

(b) the waste management operations and in particular the collection, transport, recovery and disposal of waste and hazardous waste;

Article 4 of the Law states that the provisions of this shall apply without prejudice to stricter legislation governing the operation of any of the activities falling within the scope of this Law and without prejudice to legislation which sets rules on conflicts of jurisdiction.

The Law of 2009 does not affect either the legal or regulatory provisions which entitle to a right of compensation following environmental damage or an imminent threat of such damage.

3.2. **The Law of 2014**

When considering the specific legislation which governs the operation of certain activities which fall within the scope of the provisions of the Law of 2009, it is necessary to refer to the Law of 2014.

If the activity involves the use, production or release of relevant hazardous substances, and given the risk of soil and groundwater contamination at the site of operation, the Law of 2014 requires that the operator draws up and submits to the Administration of Environment, at the time of introducing its authorisation and/or the first commissioning of the installation, a baseline report (the "**baseline report**" or "**rapport de base**"), which determines the level of contamination of the soil and the groundwater.

Upon definitive cessation of operations, the Law of 2014 requires that the operator assesses the level of contamination of the soil and groundwater by relevant hazardous substances used, produced or released by the facility. If the facility is responsible for significant soil or groundwater pollution by relevant hazardous substances in comparison with the state recorded in the baseline report, the operator shall take the necessary measures to remedy this pollution, so as to restore the site to this state.

Where the operator is not required to draw up the baseline report referred above, it hall take the necessary measures to eliminate, control, contain or reduce the substances at the time of definitive cessation of activities to eliminate, control, contain or reduce the relevant substances, so that the site, taking into account its current use or the use to which it has been ceased to present a significant risk to human health or the environment due to contamination of the soil and groundwater resulting from authorized activities, and taking into account the condition of the facility site.

3.3. **The Draft Contaminated Land Law**

The purpose of the Draft Law is to ensure the protection of the soils as well as the maintenance and restoration of the lands which have been contaminated.

In this respect, the Draft Law introduces a definition of "**restoration of contaminated lands**", being the "*work undertaken to reduce, eliminate, control or confine pollutants in the soil so that: a) the land no longer poses a concrete threat to human health or to the quality of the environment; b) the quality of the soil is restored as much as possible*".

Procedures well defined to determine whether a land has been contaminated (including rules in relation to the establishment of a diagnostic assessment or an elaborated assessment of the lands contaminated or potentially contaminated) as well as the remediation action plan are clearly set forth under the Draft Contaminated Land Law.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

As a general rule, the provisions of the Law of 2009 indicate that environmental liability is based on the principle of "polluter-payer" (article 1). In particular, when environmental damage has occurred, the Law of 2009 imposes the obligation of compensation on the operator of the activity giving rise to the contamination. Therefore, the operator is considered upfront the polluter.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

According to the provisions of the Law of 2009, the operator of the activity (i.e. the polluter) supports all the costs in relation to the reparation of damages caused by contamination unless the operator is able to prove that the damage or the threat of imminent damage is caused by (a) a third-party, notwithstanding the security measures which have been applied or (b) by complying with an order or instruction issued by a public authority other than an order or instruction following an emission or an incident caused by the operator's own activities.

Under the circumstances where the polluter does not comply with its remediation duties (for any reason) or it cannot be identified or it is not obliged to ensure remediation and support related costs in the application of the derogatory provisions set forth by the Law of 2009, as above indicated, the reparation duties shall be ultimately ensured by the Ministry of Environment.

It is to be noted that the Law of 2009 does not contemplate nor forbid the possibility of passing the reparation responsibility to the owner of the land (subject, however, to the considerations we provide under question 19.1 to this questionnaire).

In addition, prior to receiving any permit to operate a classified establishment in Luxembourg (*"autorisation d'exploitation pour établissement classé*") (the so-called "**Commodo/Incommodo Authorisation**") in accordance with the provisions of the Luxembourg law of 10 June 1999 relating to classified establishments, as amended (the "**Law of 1999**"), the operator of the establishment may be requested to comply with a certain number of obligations relating to the prevention of contamination.

When the cessation of the activity comes to an end, the relevant authorities set forth the conditions imposed to the operator for the re-establishment of the land, including decontamination measures. Such measures need to be ensured, in the first instance, by the operator of the classified establishment.

However, in relation to contaminated land falling within the scope of a Commodo/Incommodo Authorisation, case law has shown that although the operator is primarily responsible to proceed to the reparation measures affected a contaminated land, under certain circumstances such responsibility may be ultimately endorsed by the owner of the contaminated land.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

On the basis of the current regulatory framework, endorsing reparation duties in relation to contaminated land as well as the costs of such reparation may lead to very complex litigation, depending on various factors such as the time when the contamination is discovered (i.e. during the time of the operation of the activity captured under the *Commodo/Incommodo* Authorisation? after the cessation of such activity?) or who was the owner and/or occupier of the land at the time the contamination took place.

Although the various laws and regulations above quoted apply, as a general rule, the principle of "polluter-payer", the general principles of civil liability shall, in any case, apply to allocate the responsibilities between the owner and the occupier.

Without prejudice of the foregoing, it is to be noted that in accordance with the provisions of article 1384 of the Luxembourg Civil Code ("**LCC**"), the owner of the land may be considered as the ultimate safeguard of the land. Indeed, the LCC provides that "*one is responsible not only for the damage which one causes by one's own act, but also for that which is caused by the act of the persons for whom one must answer, or of the things which one has in one's custody*".

To cope with the difficulties of allocation of responsibilities between the different stakeholders in case of the occurrence of a contamination or potential contamination of land, the Draft Contaminated Land Law, in its current version, contains a provision determining, by means of a priority list, who shall be responsible to proceed to the assessment of the contamination and to implement the relevant reparation plan.

The priority order is the following:

(1) A volunteer, willing to endorse the reparation, in accordance with the conditions set forth under Article 19 of the Draft Law;

(2) The author or presumed author of the soil pollution;

(3) The owner or bare owner of the land:

  (a) when no other holder can be identified;

  (b) when any other holder is insolvent or has insufficient financial security;

(4) Failing this, and under specific circumstances set forth under the Draft Law, the State. Such circumstances include (i) if no responsible person can be identified in accordance with the provisions of the Draft Law; (ii) if a responsible person has been identified but the latter cannot be found or it is insolvent or (iii) if the State is the owner of the land.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The current regulatory framework and in particular the Law of 2009 indicates that the duties and obligations arising from such Law, including thus the reparation duties, do not apply to damages caused more when more than thirty years have elapsed since the issue, event or incident giving rise to the damage.

There are no specific provisions indicating who shall pay for the cleanup in relation to a contamination caused more than thirty years ago.

Conversely, the Draft Contaminated Land Law in its current form introduces a definition of "historical contamination" vs "new pollution" with specific criteria to determine when one or the other applies, abandoning the threshold of thirty years above mentioned.

The Draft Law further creates a distinct liability regime in relation to either historical pollution, new pollution or even "mixed pollution".

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

According to the provisions of the Law of 2009, upon the occurrence of environmental damage, the operator is required to immediately inform the Ministry and the relevant competent administration and provide all the information necessary in relation to the incident.

No limits on polluting substances are set forth under the Law of 2009. The operator is requested to propose to the Ministry and the relevant authorities the reparation measures that shall be implemented in relation to the damage caused, on the basis of a range of possible measures set forth under Schedule II to the Law of 2009. The measures proposed by the operator need to be agreed by the Ministry and then implemented.

In relation to soils pollution, such measures include to take the necessary steps to ensure the minimum removal, control, containment or reduction of relevant contaminants.

On the other hand, schedules II and IV to the Law of 9 May 2014 (which applies to facility operators) include a list of polluting substances affecting the air or water (not the soils) as well related polluting limits for air or water. No limits in relation to soil pollution are included in such Law.

It is to be noted that the Draft Contaminated Land Law shall include "polluting trigger values" in relation to soils and underground waters. Such polluting trigger values, which will be established on the basis of scientific reports, will represent concentration thresholds above which the pollutions in soil and water are likely to represent a threat.

The polluting trigger values will be set forth by a Grand-Ducal Regulation.

6. What level of cleanup is required?

As a general rule, the Law of 2009 requires that the cleanup and reparations performed allow to go back the initial status ("*état initial*") of the affected environment. Such original status is defined as "*the status of the natural resources and services at the time of the damage, which would have existed if the environmental damage had not occurred, estimated using the best information available*".

7. Are there different provisions relating to the cleanup of water?

Yes. The provisions of the Law of 2009 indicate that the reparation of environmental damage caused to water needs to be performed going back to the initial status of the environment by performing initial, complementary and compensatory reparations (as these terms are defined under the Law of 2009).

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Please refer to question 5 above which provides an exhaustive list of contaminated substances.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Yes, the contamination of land triggers penalties under Luxembourg laws.

It is important to note that the Law of 2009 introduces the principle of environmental responsibility with the purpose of preventing and repair environmental damages (including thus land contamination). The Law did not contemplate, however, specific sanctions in case a contamination occurs and/or the requirements of such Law are violated.

In this respect, it is necessary to refer to the Law of 10th June 1999, which includes criminal and administrative sanctions, in particular in the event of a breach of environmental requirements imposed at the time the operating permit is granted to the classified establishment.

The Law of 2014 provides a prison sentence of eight days to six months and a fine of 251 euros to 125,000 euros if, in the event of the occurrence of an environmental incident, the operator fails to comply with the legal requirements to limit the consequences of the incident and to proceed with the reparation thereof (as set requested under the Law of 2009.

Without prejudice of the provisions of the Law of 2009 and in line with the current regulatory framework, the Draft Contaminated Land Law in its current form also includes a prison sentence from eight days to six months and a fine of 251 euros to 2,500,000 Euros (or one of these sanctions) to whomever fails to comply with the legal requirements.

Therefore, the amount of the sanctions shall be considerably increased once the Draft Law is adopted.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Yes, the same sanction as above can occur with respect to the operator who, in breach of the 2014 Law or Law of 10th June 1999, fails to take the necessary measures, to eliminate, control, contain or reduce the relevant dangerous substances or to repair damages caused.

11. Can the legal entity be held liable?

Yes. The Luxembourg Law of 3 March 2010 ("**2010 Law**") introduced the concept of corporate criminal liability into the Luxembourg legal system. Therefore, corporate entities may be held liable for crimes and offenses as set forth under the above described regulatory framework.

However, it is to be noted that the crime or the offense need to be committed in the name and on behalf of the corporate entity, as well as in its interest in case the activities were undertaken to obtain a direct or indirect monetary benefit (gain or prevention from loss). Crimes or offenses that have been implemented for the sole personal interest of a manager, director or board member are excluded from the scope of corporate liability.

12. What authority enforces cleanup?

The Ministry of the Environment.

13. Are there any defenses?

Yes. According to the provisions of the Law of 2009, the operators of activities falling within the scope of such Law may introduce an appeal before the administrative court against the decisions adopted b the Ministry in the application of the provisions of the Law of 2009.

Such appeal needs to be introduced within 40 days following the notification of the relevant decision by the legal and natural persons legally entitled to do so.

14. Can a third party/private party enforce cleanup?

Indirectly, yes.

Any natural or legal person who demonstrates (a) to be affected by the environmental damage or (b) having a sufficient interest to assert with regard to the environmental decision-making process relating to the damage or (c) asserting an infringement of a right is authorized to submit to the Minister or to the competent administration any observation related to any occurrence of environmental damage or an imminent threat of such damage.

On this basis, these persons are entitled to request the Minister and the competent administration respectively take action in accordance with the provisions of the Law of 2009.

If the pollution assessment procedure that shall be conducted by the Ministry leads to the conclusion that contamination or threat of contamination has effectively occurred, then the Ministry will impose the reparation measures above described.

15. Can third parties claim damages?

Yes, third parties could claim damage under the general principle of civil liability (i.e. existence of a damage, causal link).

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

A distinction must be made whether the sale is concluded with a professional or a non-professional purchaser.

In the event the property is sold to a non-professional purchaser, the Luxembourg case law provides that the seller should disclose the pollution pertaining to the estate to the purchaser. If this is not the case, the purchase could trigger a claim for warranty for hidden defects ("*action en garantie des vices cachés*").

When the purchaser is a professional, the seller's obligation to provide information does not relieve the buyer of the responsibility to get information about the property that it is buying and make inquiries towards the seller and towards any other body or authority.

As an example, the pollution of a plot of land and the presence of pollution do not constitute a latent defect if the buyer is a professional in the construction and property development and could have been aware of the presence of hydrocarbons, buried slabs or tanks and/or was effectively aware of the risk of pollution.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Yes. A register of waste dump sites ("*cadastre des sites pollués*") was initiated in the application of the amended Law of 21st March 2012 relating to the prevention and waste management (the "**Law of 2012**").

This Law provides that each municipality must establish such a cadastre. In order to have a uniform database throughout the country, the Environment Administration itself took charge the establishment of this cadastre for the first time in 2006.

At present, the Environment Administration has an important database on contaminated sites that can be consulted by municipalities, businesses and private individuals.

It should be noted that the Draft Contaminated Land Law mentioned above establishes a general duty to inform which requires the owner of land on which soil pollution is present that constitutes a concrete

threat, or is likely to constitute a concrete threat, to notify the environmental authorities without delay if he is informed of the presence of such pollution. the operator of an establishment is required, if he is informed of the existence of soil pollution that constitutes or is likely to constitute a concrete threat, to notify the owner without delay.

Furthermore, the bill requires any person informed of the existence of soil pollution with the same characteristics to immediately notify the owner or the competent authority if the owner cannot be identified.

The obligation to inform relies on the owner and operator is subject to criminal penalties.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

Please refer to question 16. above.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

According to the Law of 2009, the Ministry of Environment has the authority to oblige the operator to carry out the reparation measures (including the cleanup) on the basis of the reparation plan ultimately agreed between the operator and the Ministry.

The Law further indicates that the persons responsible for the reparation of damages are "invited" to provide the Ministry with any observations they may have in this respect and the Ministry will take such observations into consideration.

On this basis we take the view that although the possibility of transferring the cleaning-up responsibility from the operator to another third party (besides the circumstances set forth under question 4.2 above) could be contemplated, no assignment of responsibility can be performed without the Ministry's consent or otherwise, that would represent a violation of the Ministry's powers.

Going forward and subject to the implementation of the Draft Contaminated Land Law on its current form, it will be possible to pass the cleaning up responsibility to a third party (including the purchaser) on the basis of application of the priority list for ensuring remediation actions. As stated under question 4.3., a volunteer, willing to endorse the reparation, is the first entity in such reparation priority list.

19.2. Contractually?

Please refer to the response provided under question 19.1. above which applies mutatis mutandis herein.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

The Luxembourg government is very active in the environment and fight against climate change. There are multiple initiatives adopted in this respect and a principle of transparency towards the citizens, with dedicated public web portals aiming at sharing the applicable regulatory framework, relevant procedures or the latest initiatives adopted by the government in this matter.

The implementation of the Draft Contaminated Land Law creates great expectations as it is part of the commitments adopted by the Grand-Duchy of Luxembourg to comply with the United Nations Development Program for 2030, introducing within a single piece of legislation, the specific protection of soils.

Therefore, we strongly recommend that any potential purchaser of land keeps this evolving regulatory environment in mind and consults the Government websites on environment i.e. https://mecdd.gouvernement.lu/fr.html or https://environnement.public.lu/fr.html.

The Netherlands

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Environmental legislation in the Netherlands is currently being reformed. As of 1 January 2024 the Environment and Planning Act (*Omgevingswet*), hereinafter referred to as EPA, contains the most important laws regarding environmental protection in the Netherlands, including regulations regarding soil polluting activities. The aim is to protect soil from contamination as well as regulate the remediation of contaminated soil and groundwater. Such rules pertain to, among others, cleanup levels and the obligation to conduct a soil investigation.

Before the EPA took effect soil contamination was regulated in the Soil Protection Act, hereinafter referred to as SPA, and several decrees based on the SPA. This legislation has been merged under the EPA. The EPA aims to simplify several regulations and laws on spatial planning, land use, environmental protection, nature conservation, construction of buildings, protection of cultural heritage and water management, by integrating the existing rules in one legal framework.

The Environmental Activities Decree (*Besluit Activiteiten Leefomgeving*), hereinafter referred to as Bal, the Environmental Quality Decree (*Besluit kwaliteit leefomgeving*), hereinafter referred to as Bkl, and the Environmental Buildings Decree *(Besluit bouwwerken leefomgeving*) will supplement the EPA with further specific laws and regulations to protect the environment in the Netherlands.

Following information will focus on the laws and regulations under the EPA, applicable in Dutch jurisdiction as of 1 January 2024. Where deemed necessary we will address former regulations under the SPA.

2. Is there a definition of contaminated land?

There is no general definition of soil contamination. Soil contamination is explained as substances and/or materials that have entered the soil or groundwater as a result of human activities and are or may be harmful to the physical environment, in particular soil and water. Soil is defined broadly under the SPA as the solid part of the earth with liquid and gaseous constituents and organisms contained therein.

In fact, any substance or material that is not found in the soil by nature and that constitutes a danger to the environment, including public health, may be regarded as soil contamination. Legislation regulates contamination that is created by human activity or actions threatening or reducing one or more of the functional properties that the soil has for humans, plants or animals.

In former legislation under the SPA a distinction was made regarding "severe soil contamination", in which case, immediate remediation of the soil was required. The distinction of severe contamination, however, is no longer relevant under the EPA. Mandatory remediation no longer depends on the presence of contamination, such as immediate mandatory remediation in cases of severe contamination. Instead remediation measures to be taken are determined based on the scope of the environmentally harmful activity and the quality of the soil.

The former SPA has made an distinction between historical soil contamination (caused before 1 January 1987) and new soil contamination (caused from 1 January 1987 onward). The difference between historical and new soil and groundwater contaminations is relevant for the rules that apply. All new soil contamination must be prevented as far as possible, and in the event that new soil and/or groundwater contamination occurs nonetheless, all new contamination must be cleaned up. For

historical soil contamination, cleanup only applies in the event that the soil contamination is considered severe and urgent cleanup is required.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

The EPA provides a legal provision concerning a general duty of care regarding prevention and remediation of soil contamination. Any person who performs activities that may have adverse effects on the physical environment is obliged to prevent or as far as possible mitigate these effects. This article addresses the person who performs aforementioned activities. Anyone is required, in the event of (imminent) soil contamination or degradation, to take all measures that can reasonably be requested to prevent or undo the relevant contamination.

Furthermore, it is prohibited to perform or refrain from performing an activity if it causes or threatens to cause significant adverse effects on the physical environment. This prohibition applies to the following activities and adverse consequences:

(a) direct or indirect substances, vibrations, heat or noise into water, soil or air, causing significant damage to the quality of water, soil or air or to landscapes, nature or cultural heritage occurs or is likely to occur;

(b) the introduction into or onto the soil, for the purpose of using the soil, of substances or activities which result in erosion, compaction or salinization, if this results in the degradation or threat of soil degradation; and

(c) neglecting a protected landscape, protected natural or cultural heritage, if it causes or threatens to cause significant adverse effects on the protected values.

In addition to abovementioned general rules, the Bal and Bkl provide specific duty of care for specific environmentally harmful activities to take measeures to prevent or undo adverse consequences. Furthermore, municipalities can include specific duties of care with respect to soil contamination in local regulations, so-called environmental plans.

Obligations regarding soil contamination and remediation under the EPA depend on the moment contamination was caused.

(a) For pollution caused after the EPA came into force remediation measures depend on the soil quality required at the site in relation to the (desired) use. There is no general statutory cleanup requirement, but the remediation measures to be taken depend on the environmental plan of the respective municipality.

(b) For pollution caused before 1987 and discovered before the EPA came into force, the provisions of the SPA will continue to apply under the transitional law. Pursuant to the SPA, any landowner, leaseholder or polluter can be ordered to clean up the site if severe contamination is involved and urgent remediation is required.

(c) For pollution caused after 1987 and discovered before the EPA came info force municipalities are only required to address a landowner to take action or take action themselves in the event of unacceptable risks.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The EPA does not, in principle, hold either the landowner (the leaseholder) or the polluter as being primarily responsible for the cleanup. However, the act clearly holds the initial polluter primarily responsible for the caused contamination.

The duty of care extends the direct causer of a contamination as well as the one who is competent and actually able to prevent or limit a violation of the duty of care. These provisions require concerning persons to take all measures that can reasonably be required to prevent and restore soil contamination as soon as possible.

If a case of contamination is discovered, the landowner or leaseholder under the authority of the municipality is required to take temporary protective measures to prevent or mitigate unacceptable risks.

For cases of soil contamination that occurred prior to the enacment of the EPA, the regulations regarding remediation under the SPA apply as mentioned in Section 3.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

If the polluter no longer exists, cannot be found or is not creditworthy, the landowner (or leaseholder) will be held responsible. The liability of the direct polluter is subject to a 30-year statute of limitations. Once this period has expired, the landowner could be held liable for the past soil contamination instead. The authorities have the discretion when deciding whether to assign the responsibility to either the polluter or the landowner or the tenant.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

An occupant, such as a tenant, can, in principle, not be held responsible for the cleanup of a site if they are not the polluter and are able to prove this. In such event, the occupant can only be required to conduct a soil investigation or take measures to prevent the migration of the contamination to adjacent sites. It is therefore advisable for landlords to include preliminary agreements in the lease agreement regarding liability with respect to (possible) soil contamination.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The same principles under Sections 4.2 and 4.3 regarding the responsibility of an occupant regarding contamination and cleanup apply with respect to historical contamination provided they are not the polluter and are able to prove this. This is, however, more complicated with respect to landowners, leaseholders and polluters.

The regulations of the EPA regarding historical soil contamination are no longer based on remediation. Instead the aim is to control soil contamination by the sustainable and effective management of remaining historical contamination.

The EPA provides no basis for subsidy schemes. Costs associated with the soil quality of a site are in principle borne by the landowner or leaseholder. If the competent authority takes measures or has them taken by third parties, the costs may be recovered from the polluter.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Pursuant to the EPA, an exploratory soil survey must be conducted in the case of specific environmentally harmful actions, in particular with respect to construction, excavation or remediation of soil. Municipalities are authorized to designate areas in their environmental plan for which exploratory soil survey is not required.

Mandatory remediation measures apply at least for the following environmentally harmful activities:

(a) excavation of more than 25 m^3 of soil with a quality above the intervention values are subject to remediation measures; and

(b) remediation of the soil to achieve an improvement in quality/eliminating risks.

Despite decentralization due to the advent of the EPA, soil quality intervention values are generally established in Appendix IIA of the Bal. The soil quality intervention value is a value for soil contamination above which there are potential risks to humans, plants or animals. A substance that exceeds the soil quality intervention value qualifies as an environmentally harmful activity and must therefore be cleaned up.

6. What level of cleanup is required?

See section 4.4. The required soil quality under the EPA for each location will be related to the desired use of the site. Contamination is addressed when it impedes the use of the soil. Dutch law no longer requires a complete, multifunctional cleanup of historical contamination (caused prior to 1987). Historical contamination only needs to be addressed if it reveales an unexpected and unacceptable risk to health. In that case actions will still have to be taken to reduce exposure to these risks.

7. Are there different provisions relating to the cleanup of water?

In general, groundwater is subject to the same rules as soil and is always treated in combination with the soil contamination. The general duty of care under the EPA as referred to in Section 3 extends to the entire environment including soil, water and air. Furthermore, the provincial authorities may include specific rules regarding the quality of the groundwater and the performance of groundwater remediation.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Specifically with regard to the reuse of PFAS-containing soil and dredged materials, a framework has been developed to fulfil the statutory duty of care. Limit standards of the amount of PFAS in soil have been set based on which soil may not be moved to prevent the spread of PFAS. Soil may contain a maximum amount of 0.1 micrograms of PFAS per kilogram. Soil suspected of containing more PFAS should be examined and cleaned up for reuse. If cleanup is no longer possible, companies must store it in a soil depot.

To solve the stagnation of projects, it has been decided to expand the standard to 0.8 micrograms per kilogram of soil by 1 December 2019, with the exception of groundwater protection areas, thus creating more space for earthmoving and dredging activities.

Companies are obliged to avoid their discharges and emissions of substances PFAS. If this emission cannot be prevented entirely, a minimization obligation applies and emissions must be limited as

much as possible. The environmental permit (*milieuvergunning*) specifies how companies must deal with this minimization. The environmental department issues this permit on behalf of the province.

The limits regarding presence of PFAS in drinking water is regulated by the EU in the Directive 2020/2148. On the initiative of the Netherlands and Germany, a proposal for a European ban on PFAS was published on 7 February 2023, to prevent pollution of the living environment. The European Commission is expected to present a final proposal in 2025 for decision-making by member states.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Violations of obligations under the EPA, such as the duty of care included in laws and regulations relating to the EPA, can also be enforced through administrative law as well as criminal law. The enforcement instruments of the government vary from an administrative coercion order, penalty payment order or administrative fine.

The violation of a number of obligations under the EPA constitutes either a crime or misdemeanour under the Economic Offenses Act (*Wet op economische delicten*). Mere ownership of contaminated property is not considered a criminal offense. Landowners must however take into account their statutory duty of care. As soon as landowners refrain from taking action reasonably expected by them, enforcement by competent authorities is possible.

Furthermore, the wilful and illegal contamination of soil, air and the surface water is prohibited under the Dutch Criminal Code. The penalties comprise imprisonment or fines amounting to a maximum of EUR 90,000,-. The severity of the penalties imposed depends on, among others, whether the contamination was caused by a natural person or legal entity, on whether it was caused accidentally or deliberately and on the severity of the contamination. The Dutch government has issued guidelines containing amounts to be paid when certain offenses are committed, to enable the Public Prosecutions Department to reach settlement in order to prevent legal proceedings.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

See Section 9. Under Dutch law, noncompliance with described requirements to remediate (in various situations) is a crime or a misdemeanour. The penalties are imprisonment or fines amounting to a maximum of EUR 90,000,-.

11. Can the legal entity be held liable?

Yes. Both a natural and legal person can be the causer of pollution and thus liable for the resulting negative consequences.

12. What authority enforces cleanup?

Generally, the municipalities will have the responsibility, as the competent authority under the EPA, for maintaining soil quality and associated remediation enforcement.

The EPA does not contain a centrally regulated remediation obligation. Municipalities may determine in a decentrally regulated environmental plan (*omgevingsplan*) when remediation measures are required. Furthermore, the municipality dermines the value above which such measures are required, provided that this value does not exceed the maximum permissible risk to humans or the permissible concentrations in air and odour thresholds.

The former SPA contained an obligation to remediate sites in cases of serious soil contamination requiring urgent remediation. The provincial authorities could issue a remediation order in this respect and are responsible for the enforcement of this order.

13. Are there any defenses?

There are a number of defenses against cleanup orders, which may or may not be successful, depending on the circumstances. The most common defense is that the party ordered to conduct a cleanup did not cause the contamination.

Another defense pertains to the owner or leaseholder, if he or she can prove that the following three criteria are met:

(a) there was no permanent legal relationship with the polluters at the time the contamination was caused;

(b) he or she was not – directly or indirectly – involved in the activity that caused the contamination; and

(c) at the time the landowner became the owner, he or she was unaware of the contamination and could not reasonably be expected to have knowledge of the contamination.

Also, if owners are able to demonstrate that they will run substantial financial risks and may even face bankruptcy as a result of conducting the cleanup, it may have a defense against a cleanup order, provided that the evidence demonstrating the financial risks is (sufficiently) convincing.

14. Can a third party/private party enforce cleanup?

The EPA only entitles the competent authorities, as mentioned under Section 12, defined therein to enforce cleanup. However, if a party has contractually bound itself to conduct a soil investigation and/or cleanup, the other party can enforce that obligation in the event of noncompliance. In addition, third parties affected by contamination can request the competent authorities, to issue a cleanup order.

15. Can third parties claim damages?

If the contamination has migrated to an adjacent site, this is considered a breach of the other party's right of ownership. The same applies if the contamination may otherwise cause damage to the owner or user of that site, for which the owner or polluter of the contaminated site may be responsible. The third party involved can claim damages for the reduced value of its premises or costs incurred for having the contamination cleaned up, or require the polluter to perform a cleanup.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

There is no written requirement laid down in Dutch law for a purchaser or seller to conduct investigations. However, as a rough-and-ready rule, the purchaser has a research obligation whereas the seller has an obligation to provide information. In principle, the obligation of the seller to inform comes before the obligation of the purchaser to perform research.

In case of doubt, the purchaser is, in principle, required to have the soil investigated. If purchasers fail to meet this obligation, they may not be able to claim compensation from the former owner in case the soil turns out to be contaminated. On the other hand, sellers of a property may not withhold any information available to them regarding the state of the property (including any soil contamination). If sellers do so nonetheless, they may be held liable by the purchaser for any damages that result in not

having shared this information at the time of the purchase. In a claim for breach of contract, purchasers will have to prove that the soil contamination impedes them from using the land as contractually agreed upon. The two-year limitation period may be a procedural hurdle for the purchaser (if the contamination is discovered too late).

There is a lot of case law on this issue. In many cases, it comes down to whether the seller had a duty to inform. To answer this question, all conditions must be considered. Whether there was a duty to investigate or a duty to inform may depend on the following factors:

- Social attitudes
- Science and the extent of the contamination
- The social position of parties
- Their legal knowledge

Often, a provision regarding liability for soil contamination is included in the purchase agreement. A qualitative obligation is included in the purchase agreement on the basis of which the previous owner can no longer be held liable for damage resulting from soil contamination.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

The EPA requires that use restrictions and measures required for sites with soil contamination to be registered by the competent authority in the Land Registry or, in the future, in the Digital System for the Environment and Planning Act (*DSO*). Existing restrictions imposed under the SPA and subject to the transitional law may be registered in the Land Registry or in the municipal restrictions registry.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

See Section 16. In case of doubt, the purchaser is, in principle, required to have the soil investigated. Sellers, on the other hand, have a duty of disclosure of the condition of the property if it is known to them.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Polluters who sell and transfer land will not relinquish their obligations to and liability for the property under the EPA. They can be held responsible for conducting soil investigations, and if the contamination turns out to be severe and a cleanup is urgently required, they will be responsible for conducting the cleanup, even if they are no longer the owner.

19.2. Contractually?

Contractually, a polluter can make arrangements with a purchaser of the land with respect to the liability for soil contamination. A provision can explicitly be agreed in the purchase agreement excluding any liability of the seller for soil contamination after the conclusion of the purchase agreement. The mere inclusion of a provision that the seller is not aware of any soil contamination is not sufficient to exclude liability of seller. However, as the polluter will remain responsible for conducting the cleanup pursuant to the EPA, such contractual arrangements will not prevent it from receiving orders from the authorities in relation to the cleanup.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

A party buying land should be aware of the fact that in the Netherlands, there is no prohibition on selling polluted land. However, Dutch law requires the seller to deliver land that is fit for the intended (known) use of the purchaser. Therefore, if contamination prevents the buyer from using the land for the intended purpose, the seller can be given notice of default. In practice, however, before entering into a contract of sale, the seller or the buyer will conduct a soil investigation. Depending on the outcome of that investigation, the parties can decide to transfer the entire risk relating to soil contamination to the purchaser, to oblige the seller to indemnify the purchaser for any costs, or to oblige the seller to clean up the land.

Increasingly, the government has been trying to recover its cleanup costs from companies that have been "unjustifiably enriched" by such cleanup. Obviously, the market value of a site increases after a cleanup. The government intends to continue benefiting from this windfall and has been increasingly successful doing so. It should be noted that the government enrichment action is not imposed to just the owner at the time of the cleanup, but may be extended to anyone who benefits from a cleanup; this may include a shareholder or a future owner. In a share or asset transaction, both the seller and the buyer should be aware of any possible (latent) enrichment claim by the government and make appropriate arrangement.

Spain

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

The Waste and Contaminated Land Act for a circular economy (Law 7/2022, of April 8), applicable at the national level, dedicates a whole chapter (Articles 98 to 103) to regulating contaminated land. The Waste and Contaminated Land Act is the framework of any autonomous community's development and must be respected and complied with in any event.

Also, Royal Decree 9/2005, of 14 January, approved by the Spanish government, establishes a list of activities that may contaminate land, as well as criteria and quality standards required to declare land as contaminated.

In addition, the Spanish Constitution vests the autonomous communities with regulatory authority in all areas concerning the protection of the environment, including contaminated land. Some autonomous communities have already passed regulations concerning contaminated land, establishing their own statutes, as well as notification and cleanup procedures.

2. Is there a definition of contaminated land?

Yes, article 2.ax) of the Waste and Contaminated Land Act defines contaminated land as follows:

"*All land the characteristics of which have been negatively altered by virtue of the existence of dangerous chemical components of human origin in a concentration such that it puts human health or the environment at unacceptable risk, according to the criteria and standards set forth by the government*."

For the purpose of the definition, it is important to note that Article 2 of Royal Decree 9/2005 defines land as "*the upper layer of the earth's crust between the bedrock and the surface*," excluding the part of the earth's surface permanently covered by a layer of water.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Royal Decree 9/2005, of 14 January, approved by the Spanish government, establishes the list of activities potentially contaminating for land, as well as the criteria and quality standards to declare land contaminated.

This Royal Decree is composed of nine articles, three additional provisions and eight annexes. Annex I is the list of 105 activities deemed potentially contaminating for the land. These are commercial or industrial activities that may cause land contamination due to the use of hazardous substances or the generation of waste. Annexes III, IV, V, VI, VII and VIII establish the criteria and quality standards to declare land contaminated, including the technical requirements that must be taken into account. Annex II establishes the contents of the preliminary soil quality report to be provided for sites by those engaged in the activities listed in Annex I.

Some Autonomous Communities have passed additional regulation, developing national laws.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Cleanup procedures are imposed on the liable party as follows: (i) the party which caused the contamination, i.e. the polluter; (ii) in the event of various parties being involved, all of them jointly and severally; and (iii) alternatively and in this order, the owners of the contaminated land and the actual possessors of such contaminated land.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The Waste and Contaminated Land Act establishes the following liability scheme for land contamination:

- The individual or legal entity which has directly caused the land contamination. If more than one, the liability shall be jointly and severally discharged.
- If the individual or legal entity which has directly caused the land contamination cannot be found, the owner of the contaminated site shall be held liable.
- If the owner cannot be found, the possessor of the land shall be held liable.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

See above.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

At present, historical contamination is not specifically dealt with in Spanish environmental legislation. When land contamination is detected, environmental authorities may impose cleanup procedures on the current owner or possessor. Such detection of contamination could take place when a license for a new activity or the change of use of a property is applied for, since the application may entail the need to report on and to investigate soil conditions. The regulations passed in some Autonomous Communities provide that co-payment of decontamination with public funds is possible under certain circumstances.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Generally, once the environmental authorities become aware, by any means (third parties, the waste producer, or the police), of the existence of land contamination, an administrative procedure will be initiated. In the course of this procedure, the environmental authorities will determine the existence of land contamination, the liable party, the fines to be imposed and the cleanup procedures to be conducted by the liable party at its own expense.

Royal Decree 9/2005 sets General Reference Levels for the corresponding substances, listed in Annexes V and VI, which must be taken into consideration for the land contamination evaluation. Moreover, the Environmental Authorities of the Autonomous Community must determine which generic reference levels must be taken into account for each specific case, considering the present and future use of the land.

In addition, when land is classified as "contaminated," cleanup procedures must be carried out, applying the best available techniques. The scope of the recuperation activities must also guarantee acceptable risk levels for the remaining contamination.

Land will be declared decontaminated when cleanup activities guarantee that it is does not represent an unacceptable risk for human health or the environment and has been so declared in an administrative resolution.

Article 99.1 of the Waste and Contaminated Land Act establishes that the Autonomous Communities must prepare and approve a public list or inventory of contaminated industrial sites and real estate properties in their respective jurisdictions. This inventory shall provide information in connection with the location of the contaminated land, the owner thereof, the date and details of the administrative resolution by which the land has been classified as contaminated and the cleanup procedures which have been imposed.

6. What level of cleanup is required?

Article 116.1 of the Waste and Contaminated Land Act establishes that the transgressors are obliged to restore the land to the circumstances existing before the administrative infraction. Use-related standards are also taken into account when defining the scope of the cleanup obligation so that the final result is compatible with the use the area is dedicated to (i.e., industrial, residential, etc.).

7. Are there different provisions relating to the cleanup of water?

Law on Water approved by the Legislative Royal Decree 1/2001 (the "Water Act") also establishes sanctions for those dumping or spilling waste material into water sites – coastline, hydraulic resources (rivers, lakes, etc.) – thus causing water contamination.

Articles 97 and 100 of the Water Act forbids "*any direct or indirect spill of water or waste material or of any waste product which contaminates continental waters or any other element of the hydraulic public domain, unless said spill has been previously authorized by the competent administration*," as well as "*any activity which may cause contamination or degradation of the hydraulic public domain*."

If there happens to be an uncontrolled spill or discharge, or a spill or discharge contravening the procedure and limitations established in the mandatory discharge authorization, the competent Water Agency (Organismos de Cuenca) shall initiate an administrative procedure in which the damage caused to the hydraulic public domain will be evaluated. The Water Agency is the administrative body vested with jurisdiction to authorize discharges, revoke discharge authorizations, or even revoke a special water concession.

Articles 116 and 117 of the Water Act describes the infraction consisting of a spill that deteriorates water quality or draining conditions, without due authorization. Moreover, Paragraph a) penalizes actions that cause damage to the hydraulic public domain, and Paragraph c) penalizes failure to comply with administrative authorizations.

The infringements contained in the Water Act will be categorized as very serious, serious, and slight, depending on the repercussion in the hydraulic public domain and public order, the risk to human safety, the circumstances of the liable party, degree of malice, obtained profit, participation, and deterioration caused to the natural resource (Article 117).

Fines range from EUR 10,000.00 to EUR 1,000,000.00, depending on the infringement.

Article 118 of the Water Act, provides that, regardless of the fine, the transgressor shall also repair the damage caused to the hydraulic public domain.

In connection with underground water contamination, please note that Royal Decree 9/2005 establishes that in the event there are signs of contamination in underground waters, this circumstance shall be reported to the Water Agency.

Royal Decree 1514/2009 on underground water sets out measures to prevent and limit pollution of groundwater and establishes the criteria and procedures to assess its chemical state.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Yes, the Spanish Government, enacting Directive 2020/2184/EU on the quality of water intended for human consumption, adopted the Royal Decree 3/2023, January 10, establishing the technical-sanitary criteria for the quality of drinking water, its control and supply. It introduces specific thresholds for the following PFAS:

- Perfluorooctanoic acid (PFOA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorononanoic acid (PFNA)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluorobutanoic acid (PFBA)
- Perfluorodecane sulfonic acid (PFDS)
- Perfluorodecanoic acid (PFDA)
- Perfluorododecane sulfonic acid (PFDoS)
- Perfluorododecanoic acid (PFDoDA)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanoic acid (PFHxA)
- Perfluorononane sulfonic acid (PFNS)
- Perfluoropentane sulfonic acid (PFPeS)
- Perfluoropentanoic acid (PFPeA)
- Perfluoro tridecane sulfonic acid (PFTris)
- Perfluorotridecanoic acid (PETarDA)
- Ácido perfluoroundecano sulfónico (PFUnS)
- Perfluoroundecanoic acid (PFUnDA)

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Criminal offenses regarding environmental damage are contained in Articles 325 through 340 of the Spanish Criminal Code. Article 325 of the Criminal Code establishes that:

"1. Punishment will consist of sentences of prison terms of from six months to two years, from ten to fourteen months of [per diem] *fines and specific professional or trade disqualification for a period of from one to two years, for the person that, in violation of the laws and other regulations of a general nature protecting the environment, directly or indirectly provokes or produces (i) emissions, (ii) spills, (iii) radiation, (iv) extractions or excavations, (v) land removal, (vi) noise, (vii) vibrations, and (viii) injections or deposits, in the atmosphere, the ground, the subsoil, or terrestrial, maritime or subterranean waters, including any incidence in their peripheral boundary areas, as well as (ix) the collection or capture of water, that by themselves or jointly with others, cause or may cause substantial damage to the quality of air, soil or water, or to animals or plants.*

2. If the above behaviors, by themselves or together with others, could seriously harm the balance of natural systems, a prison sentence of two to five years, a fine of eight to twenty-four months and special disqualification for profession or trade will be imposed. for a period of one to three years.

If a risk of serious harm to people's health has been created, the upper half of the prison sentence will be imposed, and may go up to the highest degree."

Therefore, land contamination will be considered a criminal offense whenever it results from a contravention of environmental laws, such as waste disposal without the corresponding administrative waste disposal permit or waste disposal exceeding the limits set forth in the administrative waste disposal authorization.

According to the current criminal liability scheme regarding environmental offenses, and in a scenario in which a criminal offense has been committed through an industrial activity, criminal liability may be assigned to:

- the individual within an offending company's organizational structure considered to be the perpetrator of the offense due to his/her direct responsibility and singular capacity to fulfill the action or omission deemed an offense;
- the individual within an offending company's organizational structure who fulfills functions the consequences of which constitute a specified offense, even though the individual does not meet the requirements necessary to be considered directly responsible. In such cases, individual liability shall be assigned whenever the individual is a director, corporate agent or business representative, and meets the necessary requirements for such accusation. In any event, such liability will only be assigned if the action is found to be an offense. Thus, it will in any event be necessary to prove the effective fulfillment of the functions the exercise of which has led to the offense, as well as to the causal relationship between the failure to comply with environmental regulations and the occurrence of the offense; or
- the offending company, as of the amendment of the Criminal Code, effective 23 December 2010.

The foremost element in the specified offense is the infraction of environmental regulations, which constitutes the basis of the accessory relationship between Criminal Law and Administrative Law.

Otherwise, the specified offense may consist of any action in a long list considered to fall under this category.

Articles 326 and 328 of the Criminal Code establish various types of serious offenses specified by Article 325, the majority of them having to do with industrial pollution and waste. A particularly serious offense is the concealment of relevant information regarding the industry's effects on the environment.

Investigation of environmental offenses may be triggered by the initiative of environmental agencies, the public prosecutor's office and also by any individual acting in defense of the damaged environment, regardless of the fact that the individual may or may not have suffered any damage as a result of the environmental offense (e.g., NGOs).

Finally, it is worth mentioning that pursuant to the toxic and hazardous waste regulations, criminal proceedings do not paralyze other proceedings (of either an administrative or civil nature) which might have been initiated previously, seeking the restoration of the state of the environment prior to the damage, or seeking economic compensation. In such event, the criminal jurisdiction will determine the corresponding civil liability resulting from the environmental offense subject to criminal investigation.

In light of the above, if criminal proceedings were to be initiated to investigate and determine criminal liability arising from or associated with land contamination, the liability would be imposed on the company's officers found liable for and guilty of the criminal offense.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

The Waste and Contaminated Land Act establishes that infractions regarding land contamination may be regarded as slight, serious, or very serious, depending on the resulting damage, the situation of the transgressor, the degree of participation and a repeat of the incident, as well as the benefit obtained by the polluter (Articles 108 and 110 of the Waste and Contaminated Land Act).

Failure to comply with cleanup procedures is deemed a very serious infraction, since Article 108 of the Waste and Contaminated Land Act makes "the failure to comply with the autonomous authorities' orders to clean up or remedy the contamination or with any other agreement established by the contaminator and the environmental authorities" a very serious administrative offense.

According to Articles 108.2 c) and f), 109.1 a) and 116 of the Waste and Contaminated Land Act, fines to be imposed on the liable party may total EUR 3,500,000.

Furthermore, Article 117 of the Waste and Contaminated Land Act grants the competent environmental agency the possibility of imposing dissuasive fines on transgressors that do not comply with the cleanup obligation.

11. Can the legal entity be held liable?

Regarding criminal offence, yes as explained below. With regards to administrative sanction, the legal entity can also be held liable.

12. What authority enforces cleanup?

Cleanup obligations are enforced and monitored by the competent environmental agency of the Autonomous Community where the site is located.

13. Are there any defenses?

In principle, if a person is found to be liable for land contamination, this person shall be responsible for carrying out the cleanup procedures. Once a disciplinary procedure starts, however, the liable party may voluntarily choose to propose cleanup procedures to the environmental agency. This proposal will normally trigger negotiation with the environmental agency toward an agreed-on remediation plan. This is a convenient approach in cases presenting a historical contamination problem.

14. Can a third party/private party enforce cleanup?

Even though the legal regime on civil liability in connection with activities with adverse impact on the environment still follows, mainly, fault-based criteria (i.e., for a party to be held liable, there must be guilt or negligence), the Supreme Court resolutions and regulations recently passed are currently introducing and applying strict liability criteria, which consider only the cause-effect relationship between the activity and the damage caused and disregard other considerations in connection with the diligence or guilt of the polluter.

15. Can third parties claim damages?

Third parties are indeed entitled to claim damages for land contamination.

Historically the Spanish Civil Code, regarded as the basis for Spanish private law, has addressed the civil liability arising from land contamination with the provisions regarding noncontractual obligations or tort, contained in Article 1902 of the Civil Code, which establishes:

"*Who causes damage to another through act or omission, with the intercession of guilt or negligence, is obliged to offer reparation for the damage thus caused.*"

In order for a third-party claim regarding land contamination to succeed under civil law provisions on tort, the third party must prove:

- the action or omission of the party causing damage;
- the existence of a real damage to his/her interest; and
- a causal link between the polluter's action/omission and the damage caused to the third party.

Law 26/2007, of 24 October, on Environmental Liability, also establishes a strict liability pattern, following the pattern of the German law on environmental civil liability.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No investigation is legally required in the event of sale, although Royal Decree 9/2005 provides that the owners of land in which some potentially polluting activity has been developed in the past shall declare this circumstance in the sale of the land.

When requesting a license or authorization for the establishment of any activity other than those potentially pollutant, or entailing a change in land use, submission of a status report will be required.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

If the land is declared contaminated by the relevant environmental authorities of the autonomous community, this declaration shall be registered in the land's entry as a marginal note. The marginal note will only be removed from the registry when the contamination has been remedied and certified as such by the relevant environmental authorities.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No investigation is legally required in the event of sale, although Royal Decree 9/2005 provides that the owners of land in which some potentially polluting activity has been developed in the past shall declare this circumstance during the sale of the land.

When requesting a license or authorization for the establishment of any activity other than those potentially pollutant, or entailing a change in land use, the submission of a status report will be required.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

If the polluter sells contaminated land, Article 98.3 of the Waste and Contaminated Land Act would apply.

According to this article and Royal Decree 9/2005, in order to ensure the parties' knowledge of a land's contamination at the time of purchase, owners of properties where the activities established in Annex I of said Royal Decree have been conducted must declare that fact in the public deed of sale. Furthermore, this declaration must be registered as a marginal note in the purchase's registration at the Property Registry.

If the land is declared contaminated by the relevant environmental authorities of the autonomous community, this declaration shall be registered in the land's entry as a marginal note. The marginal note will only be removed from the registry when the contamination has been remedied and certified as such by the relevant environmental authorities.

The Property Registry is a public record, and a potential purchaser may therefore become aware of the declaration of the land as contaminated even before the purchase.

19.2. Contractually?

From a Civil Law perspective, if a land's contamination is not disclosed by the seller to the purchaser and the land is accepted by the purchaser prior to the sale and purchase, the purchaser would be entitled to bring an action, which is the so-called Acción por Vicios Ocultos (Action for Hidden or Latent Defects), against the seller.

Pursuant to this action, individuals and companies selling their land or industrial venture are liable to the purchaser for any possible site contamination or for any damage that their industry may have caused to the environment before its sale, even if the damage does not show until after the sale. This liability stems from the obligation to sell goods free of encumbrance, as established by Articles 1461 and 1474 of the Civil Code, and consists of the selling party's liability to the purchaser with regard to: (i) peaceful possession of the sold goods; and (ii) hidden or latent defects that the sold goods may have.

The selling party is obliged to deliver goods in the physical or legal conditions assumed to be true by the parties entering into the sale and purchase agreement. In any event, even in a case of good faith, the selling party must answer to the purchaser for any economic disruptions caused by the purchased goods or any defects unknown or unforeseen by the purchaser. Such problems shall constitute breach of contract, which must then be remedied. A possible termination of the agreement may take place, even though provisions had not been made for such a situation.

Application of the theory of hidden defects requires that:

- a hidden or latent defect or damage exists;
- the existence of the said defect or damage is unknown to the purchaser; and
- the defect or damage had existed prior to the sale and purchase contract. The defect or damage must also be of a serious nature. That is, it must be a defect or damage that would have dissuaded the purchaser from making the purchase, had he or she known of its existence.

Repercussion for hidden or latent defects shall take place within six months of the date of the contract, and, if such is the case, it will result in either the annulment of the agreement with the return

of the purchase price, called acción redhibitoria (action for recovery), or a reduction of the original price, called acción estimatoria (action in equity).

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

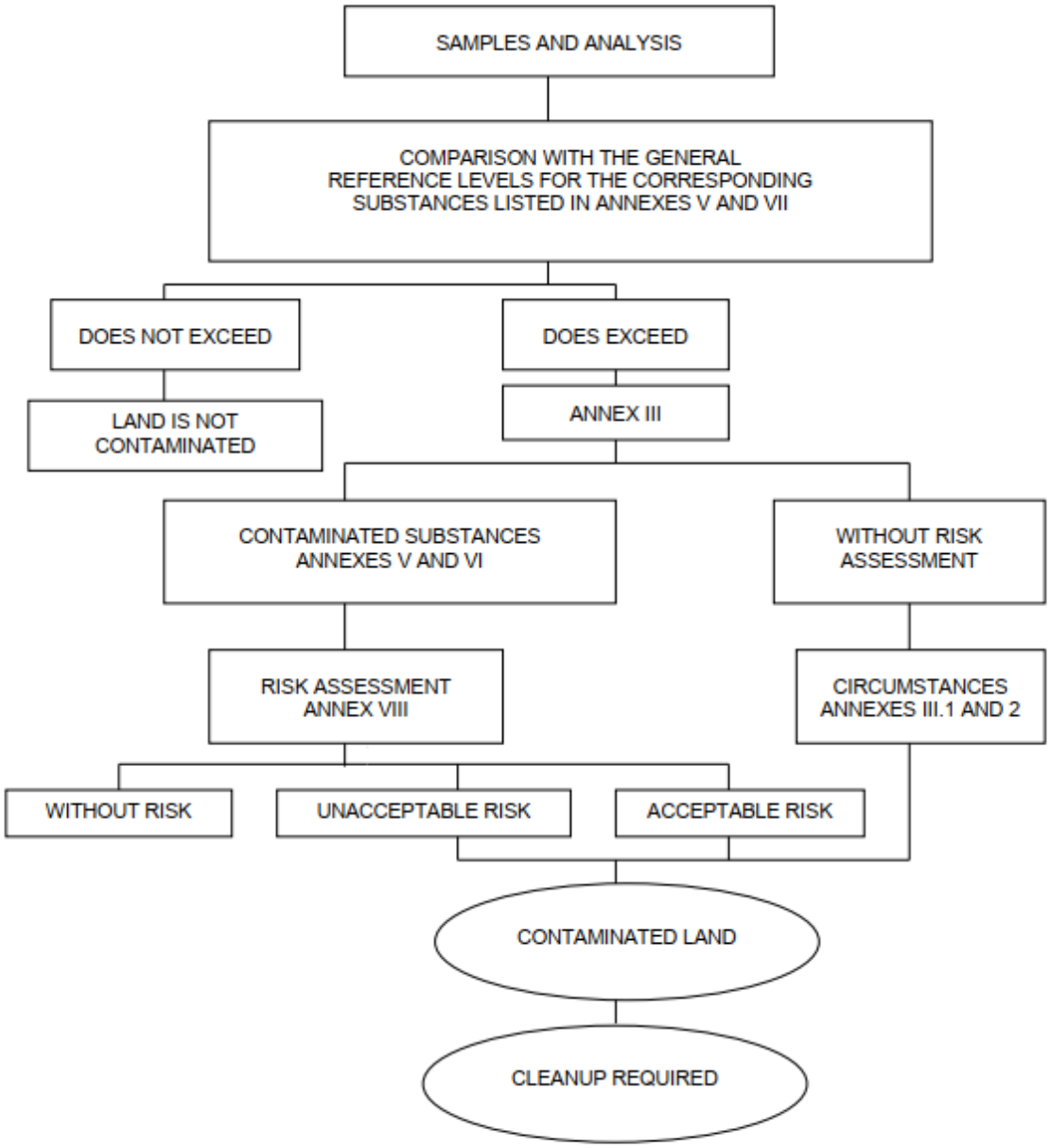
It is important that prior to the execution of the sale and purchase agreement, the potential purchaser of land in Spain carry out an investigation into the zoning classification of the land. This must be done at the city hall with jurisdiction in the territory where the land subject to the sale and purchase transaction is located. Often, zoning plans approved by municipal governments contain valuable information about environmental issues relating to the land included in these plans. In addition, a visit to the corresponding environmental agency should be considered.

Furthermore, if the sale and purchase relates to the acquisition of an industrial facility, it is recommended that the sale and purchase agreement include a clause whereby the seller holds the purchaser harmless against any liability arising in connection with the operation of the industrial facility during the five-year period after the closing date, provided that such liability derives from facts that occurred prior to the closing.

Moreover, Royal Decree 9/2005 established the obligation of those engaged in the activities listed in Annex I to provide a preliminary report on the soil quality of their sites to the environmental agency before February 2007. This preliminary report had to include general information on waste and contaminating substances produced by or used in the site's activity, as well as the storage of the same. After reviewing the information provided in the preliminary report, the environmental agency was entitled to request further data, or even order that analyses be carried out. In addition to the preliminary report, status reports shall also be provided to the environmental agency with the frequency to be determined by the autonomous communities as a general rule, or on a case-by-case basis. Having available the information related to the preliminary report and subsequent requirements (as the case may be) may also serve the interest of the potential purchaser.

While the implementation of Royal Decree 9/2005 is developed of procedural matters and parameters in many autonomous communities, but the Ministry of Environment approved in 2007 the Technical Guidelines for the Application of the Royal Decree (link -only available in Spanish). This document provides the methodology, criteria and standards for the declaration of contaminated land.

Please see the scheme below showing the procedure for land to be considered contaminated.


SAMPLES AND ANALYSIS
COMPARISON WITH THE GENERAL REFERENCE LEVELS FOR THE CORRESPONDING SUBSTANCES LISTED IN ANNEXES V AND VII
DOES NOT EXCEED
DOES EXCEED
LAND IS NOT CONTAMINATED
ANNEX III
CONTAMINATED SUBSTANCES ANNEXES V AND VI
WITHOUT RISK ASSESSMENT
RISK ASSESSMENT ANNEX VIII
CIRCUMSTANCES ANNEXES III.1 AND 2
WITHOUT RISK
UNACCEPTABLE RISK
ACCEPTABLE RISK
CONTAMINATED LAND
CLEANUP REQUIRED

Sweden

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Chapter 10 of the Environmental Code clarifies the liability to remedy environmental damage, that is, to perform investigation, cleanup (Sw*. efterbehandling*) and other measures to remedy such damage. The regulations are applicable to environmental damage through contamination of, among others, land and water areas, groundwater, buildings and structures. The rules are based on the "polluter pays" principle.

2. Is there a definition of contaminated land?

Environmental damage is stipulated in Chapter 10 of the Environmental Code and divided into contamination damage (Sw. *föroreningsskada*) and serious environmental damage (Sw*. allvarlig miljöskada*). Contamination damage is defined as environmental damage that may cause damage or detriment to human health or the environment by contamination of land and water areas, groundwater, buildings or structures. Serious environmental damage means damage includes that which constitutes a significant risk to human health through soil contamination, has a significant adverse effect on the quality of the aquatic environment, or significantly damages or impairs the conservation of certain animal or plant species or the habitat of such species.

Thus, the key difference between the rules on serious environmental damage and the rules on contamination damage is the threshold for when serious environmental damage is considered to exist. Depending on the nature of the damage, different circumstances must be taken into account. For example, in the case of soil contamination, there must be a significant risk to human health for it to be considered serious environmental damage, which is not a prerequisite for it to be considered contamination damage.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

Liability for remediation rests primarily with the party conducting the activity (the polluter). In the Environmental Code, this is defined as "the operator" (Sw*. Verksamhetsutövaren*). According to Swedish case law, the person who has the actual and legal means to carry out a measure is considered to be the operator. As a general rule, the environmental liability remains with the legal entity conducting the relevant business operations.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The landowner is secondarily responsible, provided that the landowner is not considered the actual operator in which case the landowner has the primary responsibility, see above. If the party conducting the activity is unable to perform the cleanup, someone who has acquired the land after 1 January 1999, may be held responsible for the cleanup of contamination damage if he or she was

aware of the contamination at the time of the acquisition or ought to have discovered it when inspecting the land before entering into any acquisition agreement.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

If several parties have conducted business that has caused pollution, such parties shall as a general principle be jointly responsible for remedial actions. Such joint responsibility means that either party may be responsible (in full) for taking remedial actions vis-à-vis the authorities. In case a party has been ordered to assume full responsibility for environmental damage (and if there are other parties that are jointly responsible) the first party may direct a recourse claim against the other parties. In such case, the relevant costs shall be divided between each of the responsible parties after what is reasonable considering, inter alia, each party's contribution to the environmental damage.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes.

However, the transitional provisions of the Environmental Code indicate that the remedy for damage and the performance of remediation is applicable to ongoing environmentally hazardous activities that have continued after 30 June 1969.

If no one can be held liable for historic contamination, for example because the operator is unable to pay, it is ultimately the authorities that will have to pay for the cleanup. In such cases The Swedish Environmental Protection Agency (Sw. *Naturvårdsverket*) is responsible for national planning and prioritization of the remediation of pollution damage.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Whenever a measure has caused damage or pollution to the environment, the operator is responsible for remedying the damage or pollution until it has ceased. Usually, The County Administrative Board (Sw. *Länsstyrelsen*) decides, and it bases its decision on an assessment of whether a cleanup must be performed, which includes assessing the nature, extent and environmental impact of the remedial action.

6. What level of cleanup is required?

If it has been established that there is a responsible party for remediation, the responsible party must, to a reasonable extent, carry out or pay for the remediation measures needed to prevent, hinder or counteract damage or inconvenience to human health or the environment. The assessment of reasonableness is to be carried out in two stages: firstly, it must be investigated which remediation measures are environmentally justified and reasonable from a cost point of view, usually by means of a risk assessment, investigation of measures and risk evaluation, and then an assessment of the extent of liability must be made. The question of whether a measure is to be regarded as environmentally justified is assessed on the basis of e.g., the type and hazardousness of the pollution, the degree of pollution, the risk of dispersion, the sensitivity of the surroundings. After the measures have been carried out, the area should not pose an unacceptable risk to people or the environment (including the surrounding area) in the current or planned land use.

7. Are there different provisions relating to the cleanup of water?

No.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

In groundwater, there are specific environmental quality standards that are a legally binding threshold for assessing impact, risk, status and need for remediation. This is being applied to the following substances: PFBS, PFHxS, PFOS, 6:2 FTS, PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA and PFDA.

In soil, there are no legally binding target values. However, there is a indiactive guideline assessing the level of contamination in soil that does not result in unacceptable health effects or unacceptable negative effects on the environment.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Owning contaminated land is not a criminal offense. However, it is a criminal offense to contaminate land if it has been done intentionally or through negligence. Only trivial offences are excluded from the scope of criminal liability. The possible penalties for criminal offences of normal degree are a fine or imprisonment not exceeding two years. If the criminal offense is considered serious, the penalty shall be imprisonment no less than six months but shall not exceed six years.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

It is not a criminal offense to defy an order from the administrative authorities to perform a cleanup. However, such an order may be issued under penalty of a fine.

11. Can the legal entity be held liable?

Yes, a legal entity may be subject to an environmental sanction or corporate fine. However, there is no criminal liability for legal entities in Sweden. This means that if a criminal act is committed in the context of a business of a legal entity, a natural person within the entity needs to be held liable.

12. What authority enforces cleanup?

The relevant County Administrative Board enforces cleanups.

13. Are there any defenses?

It is possible to argue there is no causality between the suspected polluter and the actual contamination. In such cases it is possible to appeal a cleanup decision to the Land and Environment Court (Sw*. Mark- och miljödomstolen*), which ultimately can be appealed to the Land and Environment Court of Appeal (Sw. *Mark- och miljööverdomstolen*). Under certain exceptional circumstances, it is also possible to appeal to the Supreme Court (Sw. *Högsta domstolen*).

14. Can a third party/private party enforce cleanup?

No

15. Can third parties claim damages?

Yes. Damages can be claimed by third parties.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

In case a buyer should reasonable not have discovered a defect in a property, the seller is liable for so-called hidden defects, regardless of whether the seller is aware of the defect or not. The seller thus bears the risk of defects or conditions that the buyer should not have discovered, which is an incentive, but not a legal requirement, for the seller to provide information about the property. This is because conditions such as contaminated land, cannot be considered hidden defects once it has been disclosed.

There is however no general duty of disclosure on the seller to inform the buyer of known defects that existed at the time of purchase. The buyer's fulfillment of the obligation to examine the property is thus of major importance. It has been established in case law that the decisive factor whether the buyer should have discovered contamination through its duty to investigate.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Yes, property owners have an obligation to provide information to the supervisory authority. The user of a property, such as a tenant, is also subject to the obligation to provide information. The obligation to provide information arises when there is actual knowledge that an area is affected by pollution. However, there is no obligation to provide information when the pollution is insignificant and therefore of minor importance.

The purpose of the information requirement is to provide the supervisory authority with information about contaminated areas, which can then form the basis for various types of decision. The decision may concern requirements for investigations, declaration of an area as an environmental risk area, orders for preventive or remedial measures.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No. Please note what is stated in Section 4.2 and 16. It is, of course, important for a buyer of land to inspect it properly.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

If a party has been found responsible to clean up contaminated land, this responsibility cannot be transferred to another party that acquires the property.

19.2. Contractually?

The buyer and seller of land are, of course, free to agree that the buyer shall carry out the cleanup on behalf of the seller. However, this is not binding in relation to the authorities.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Since the buyer of land could end up responsible for the cleanup of contaminated land, it is important to inspect the land properly and to negotiate appropriate warranties in the purchase agreement.

Switzerland

Daniel Peregrina

by Baker & McKenzie, Geneva

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Since the enactment of the Federal Law on Environmental Protection (FLEP) in 1983, Swiss law has tried to regulate soil contamination. In that year, the Swiss legislator introduced, under Chapter 5 of the FLEP, an initial regulation that seeks to safeguard soil fertility. In order to achieve such goal, a federal decree on soil contamination adopted in 1986 set limit values for 11 metals and required the cantonal authorities to continuously monitor soil conditions. If those limits were exceeded, the cantonal authorities were authorized to impose certain abatement measures in the area of air pollution and waste management. Those rules, however, were not directly applicable to contaminated industrial areas and did not set any obligation to clean up contaminated sites. This gap in the Swiss environmental legislation was filled in 1997 by the introduction of Articles 32c to 32e in the FLEP. These articles were again amended in December 2005 in order to improve the situation of the innocent owner who discovers the pollution of his land. According to this regulation implemented by the Swiss government, the cantons have to ensure the supervision and cleanup of waste sites and contaminated sites where there are damaging or dangerous emissions or risks of future emissions. The cantons must also establish a public register of waste sites and contaminated sites. Furthermore, the costs of any measures are to be borne by the polluter. Where there are several contributors to the pollution, the costs have to be divided among them. The owner of a waste site or a contaminated site may also be liable. However, he or she may escape liability if he or she can show that despite a careful due diligence, he or she did not know of the contamination. In order to finance the cleanup of waste sites, operators of waste sites and waste exporters may be asked to pay a fee for the storage of waste. Based on the above, the federal government adopted the federal decree on contaminated sites on 26 August 1998. This federal decree entered into force on 1 October 1998.

2. Is there a definition of contaminated land?

According to Article 2 of the Federal Decree on contaminated sites (the "Federal Decree"), the following sites are considered polluted: • All waste disposal sites • Industrial sites where substances hazardous to the environment are being or have been used • Sites polluted consequent to an accident or a catastrophe According to Article 2, paragraphs 2 and 3 of the Federal Decree, those polluted sites are officially considered contaminated sites if the pollutants in the soil exceed specific values or if the air emissions linked to the soil contamination exceed the limit values provided by the same decree.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Please refer to 1.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

According to Article 20 of the Federal Decree, the preliminary investigations, as well as the cleanup of a contaminated site, rely primarily on the company or the individual controlling the site, which is usually the landowner or the lessee of the land. However, the authorities can ask a third party to proceed with the investigations and cleanup of the sites if it is clear that the third party is at the origin

of the contamination of the land, provided that the landowner agrees. The cantons may also proceed with the investigations and the cleanup of the polluted sites if it is necessary to prevent undesirable situations, i.e., if the person who has to proceed is unable to execute the measures, or if the latter does not act despite a warning. It is very important to stress that Swiss law clearly makes a distinction between the obligation to proceed with the investigations and the cleanup of the sites with the liability for the payment of the said measures. In this respect, the payment liability is primarily on the polluter. The owner of the land, who is generally in charge of financing the said measures, can escape such a liability if he or she can show that despite a careful due diligence, he or she did not know of the contamination of the land. The landowner, who is required to proceed with a cleanup, is authorized to request the authorities to issue a decision determining the company or the individual who will, in the end, have to indemnify the land owner for the investigation measures, as well as for the cleanup of the contaminated sites. If the individuals liable for the payment of the measures cannot be identified or are bankrupt, the authorities have to indemnify the landowner for the costs he or she has incurred.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The landowner is generally liable for the payment of the investigations and the cleanup. If the landowner is not the polluter, he or she can escape such a liability if he or she can show that despite a careful due diligence, he or she did not know of the contamination of the land. In such a scenario, if the individuals liable for the payment of the measures cannot be identified or are bankrupt, the authorities have to indemnify the landowner for the costs he or she has incurred.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

An occupier can be held liable for the cleanup of the sites from a financial point of view only if he or she is also the polluter. If there are various polluters, the authorities will determine the share to be paid by each polluter, based on the origin of the contamination. According to recent case law, a landowner who acquires land knowing that it is polluted may have to pay up to 20 percent of the clean-up costs, even if her or she has not participated in the actual pollution act.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The cleanup liability does include historical contamination. An innocent landowner may nevertheless be in a position to avoid his or her liability according to what has been discussed under 4.1. As mentioned above, the recent amendment aims to exclude historical contamination from the cleanup liability of an innocent owner. According to the amendment, if the polluter cannot be found or is bankrupt, it is up to the cantonal authorities to finance the cleanup of historical contamination. This obligation is financed via the tax paid by the owners of waste disposal sites in Switzerland or by the exporters of waste. These taxes are then allocated to the investigations and cleanup paid by the cantons for polluted sites on which no waste has been disposed of after 1 February 2006, and for which the polluters could not be found or is bankrupt, as well as for polluted sites that have been mainly used for the disposal of urban waste.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

If there is a suspicion of soil contamination, the cantonal authorities are authorized to request a preliminary investigation of the site, including some analyses of the soil and the underground water. The Federal Decree provides limit values; if the said values are exceeded, the site has to be cleaned up.

6. What level of cleanup is required?

According to Articles 15 and 16 of the Federal Decree, the objective of the cleanup is to avoid any further substantial risk to the environment and, more specifically, to groundwater. A complete cleanup of the site is not necessary if it is possible to regularly monitor the site in order to avoid any future risk to or contamination of groundwater. The objective of the cleanup is not to restore the fertility of the land, but only to avoid any future risk of air or groundwater contamination due to contaminated soil.

7. Are there different provisions relating to the cleanup of water?

There are none, as long as the contamination of the water is linked to a contaminated site. However, there are various decrees ensuring the quality of water in Switzerland.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

There is no legal threshold in force in Switzerland relating specificaly to PFAS; it is planned to have such thresholds available in 2024. For the time being the situation of each polluted site with PFAS is analized on a case by case basis.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

As such, the contamination of land is not a criminal offense, so owning contaminated land is therefore not a criminal offense. But when land is contaminated, this usually means that the polluter has not complied with other obligations provided for by the FLEP, such as the obligation to take the necessary measures in order to avoid a major accident, and the interdiction to dispose of waste outside authorized waste disposal sites. Violation of these obligations is considered by the FLEP as a criminal offense. The maximum penalty is a fine of CHF1,080,000 (EUR900,000) or imprisonment for a maximum of three years.

Please note that criminal law is usually not used by the Swiss authorities in enforcing environmental legislation.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Not proceeding with a mandated cleanup is considered a criminal offense. The maximum penalty is a fine of CHF10,000 (EUR8,300).

11. Can the legal entity be held liable?

No, except if the fine is below CHF 5'000.]

12. What authority enforces cleanup?

According to the Federal Decree, it is ultimately up to the cantonal authorities to enforce the cleanup of contaminated sites. If the land owner refuses to proceed with a cleanup ordered by the cantonal authorities, or if it is not in a position to do so, the authorities can proceed to clean up the sites themselves and recover the costs from the polluter.

13. Are there any defenses?

Please refer to 4.1.

14. Can a third party/private party enforce cleanup?

No.

15. Can third parties claim damages?

According to Article 59a of FLEP, the owner of a facility posing particular risks to the environment is strictly liable for any damage caused by emissions resulting from the realization of this risk. These rules also apply to contaminated sites. However, this liability does not include purely environmental damage, that is, damage that cannot be attributed clearly to one individual or to several individuals, but only to the public.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

Under Swiss law it is the duty of the authorities to indentify the polluted sites by evaluating existing information such as maps, official registers and reports. They may obtain information from the holder of the site or from third parties. Each site which is established as polluted or where there is a high probability that it is polluted is entered into a public register of polluted sites. In case a site is registered as polluted a reference to said registration is done in the contract of sale.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Refer to number 16 hereabove.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

The sale of a parcel of land registered in the Register of polluted sites is subject to an authorization which is granted if no harmful effects or nuisances are expected from the site, if a security is provided for the costs of the expected measures or there is an overriding public interest in the sale of the parcel. During the authorization process it is frequent if no investigation has been done previously that the seller has to conduct an investigation in order to determine the situation.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

f a polluter sells his land, he or she remains, from a contractual point of view, liable vis-à-vis the purchaser for the cleanup of the land. Nevertheless, this guarantee lapses after one year. The parties are free to agree, either to renounce such a guarantee, or to extend the validity of the said guarantee for more than one year. Nevertheless, please note that the polluter cannot be held liable for contamination that the purchaser could have discovered by conducting due diligence review of the land (Article 200 of the Swiss Code of Obligation).

19.2. Contractually?

The polluter can agree with a third party that such party indemnifies or holds harmless the polluter in case of remedial action requirements. The authorities, however, are not bound by such contractual agreements, which leaves the polluter with the risk of being required to remedy a site in the case of insolvency of his or her contractual partner.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

In order for an innocent landowner to avoid any possible liability, as described under 4.1, it is highly recommended that prior to a purchase of land in Switzerland, a careful due diligence be carried out, including examining some soil samples if there are reasonable grounds to think that the land may be contaminated.

Ukraine

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

General provisions concerning environmental contamination (including contamination of land) are contained in the Law of Ukraine "On Environmental Protection," dated 25 June 1991 (the "**Environmental Protection Law**"). Specific requirements for land protection are stipulated in the Land Code of Ukraine, dated 25 October 2001 (the "**Land Code**"), the Law of Ukraine "On Land Preservation," dated 19 June 2003 (the "**Land Preservation Law**"), and the Law of Ukraine "On State Control over Land Operation and Land Preservation," dated 19 June 2003 (the "**State Control Law**"). Relevant norms are also included in the Code of Administrative Offences of Ukraine, dated 12 December 1984 (the "**Administrative Offences Code**") and the Criminal Code of Ukraine, dated 5 April 2001 (the "**Criminal Code**").

The Law of Ukraine "On Legal Regime of Territories Suffered from Radioactive Contamination Caused by Chernobyl Disaster" (the "**Law on Radioactively Contaminated Land**") may apply to radioactive contamination of land.

Among other legal acts regulating land contamination are the following:

- The Law of Ukraine "On Waste Products," dated 5 March 1998
- The Law of Ukraine "On Pesticides and Agro-Chemicals," dated 2 March 1995
- The Tax Code of Ukraine, dated 2 December 2010
- Resolution of the Cabinet of Ministers of Ukraine No. 284 "On Procedure for Determining and Compensating Damage to Land Owners and Land Holders," dated 19 April 1993
- Resolution of the Cabinet of Ministers of Ukraine No. 661 "On Approval of Regulation on Land Monitoring," dated 20 August 1993
- Order of the Ministry of Agricultural Policy of Ukraine No. 51 "On Approval of Regulation on Agricultural Land Monitoring," dated 26 February 2004
- Order of the Ministry of Agricultural Policy of Ukraine No. 283 "On Approval of Procedure of Land Conservation," dated 26 April 2013
- Resolution of the Cabinet of Ministers of Ukraine No. 35 "On Approval of Procedure of Land Conservation" dated 19 January 2022
- Methods for Determining Damage Caused by Contamination and Clogging of Land Resulting from Environmental Legislation Violations as approved by Order of the Ministry of Environmental Protection No. 171, dated 27 October 1997 (in a restated version approved by Order of the Ministry of Environmental Protection No. 149, dated 4 April 2007 and amended by Order of the Ministry of Environmental Protection No. 241, dated 4 November 2020)
- Norms of Maximum Permissible Concentrations of Hazardous Substances in the Soils, and the List of Such Substances approved by the Resolution of Cabinet of Ministers of Ukraine No. 1325, dated 15 December 2021

- Hygienic Regulations on the Permissible Concentration of Chemical Substances in the Soil approved by Order of the Ministry of Health Care of Ukraine No. 1595, dated 14 July 2020.

2. Is there a definition of contaminated land?

According to the Methods for Determining Damage Caused by Contamination and Clogging of Land Resulting from Environmental Legislation Violations, land is considered contaminated if there is a negative quantity and quality change in the composition thereof resulting from commercial activity or other factors.

According to Article 169 of the Land Code, "technologically contaminated land" means land that is contaminated pursuant to the economic activity of an individual, which resulted in the degradation of land and negatively affected the environment, as well as human health. Technologically contaminated lands include radioactively dangerous land, radioactively contaminated land, and land contaminated with heavy metals and other chemical elements, etc.

According to Article 4 of the Law on Radioactively Contaminated Land, "land contaminated with radioactive elements" pertains to land that requires protective measures against radiation and other specific interventions therein, with the purpose of restricting any additional radiation caused by the Chernobyl disaster and to ensure normal commercial activity.

Article 1 of the State Control Law also provides for the term "land contamination" and defines it as the accumulation of pesticides, agrochemicals, heavy metals, radionuclide, and other elements in the soil and subsoil waters that is caused by an anthropogenic influence in the amount exceeding their natural levels, leading to the change of their quality and quantity therein.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes, there are. Legal acts specified in Section 1 contain provisions concerning cleanup.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

According to Section XV of the Environmental Protection Law, Article 157 of the Land Code and Article 45 of the Land Preservation Law, the actual polluters are responsible for cleanup and should bear the costs related thereto.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The Land Preservation Law obliges the land owners and users to take measures preventing negative and ecologically dangerous impact on land, and to eliminate the consequences thereof. If the land user is not guilty of land contamination, he or she has the right to receive compensation from the polluter for the costs incurred in decontaminating the land. In case the polluter cannot be found, the land user will bear final responsibility for cleanup of the land.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

As mentioned above, the Land Preservation Law envisages both the users' and the owners' responsibility for eliminating the consequences of ecologically dangerous impact on land. At the same time, it does not establish any guidelines on how this obligation should be apportioned between such responsible parties. Therefore, this may be addressed in a land use (e.g., lease) agreement.

As a general rule, the risk of accidental damage to property is borne by the owner, unless otherwise set forth by the applicable law or agreement (Article 323 of the Civil Code). This notwithstanding, in case it is proven that contamination is caused by the land user, the owner has the right to claim compensation from such user for all costs of land decontamination.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Ukrainian laws do not specifically address the cleanup of historical contamination. Therefore, the general rules on cleaning up, as described above, will apply.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

Norms and Hygienic Regulations, listed in Question 1, specify the list of polluting substances and their maximum permissible concentrations in soil.

The state authorities responsible for: (i) the realization of the state policy in the area of state control over land (the State Service of Ukraine for Land Survey, Cartography and Cadaster); (ii) the realization of the state policy in the area of environmental protection (the Ministry of Environmental Protection and Natural Resources); (iii) agricultural policy authorities (the Ministry of Agrarian Policy and Food of Ukraine, the National Academy of Agricultural Science) monitor land on the national, regional and local levels in order to reveal changes in soil condition in a timely manner, as well as assess its quality and prevent the negative impact of land contamination (if such risk exists). In case land contamination is found, such state authorities may suspend or terminate the operation of the enterprise, hold the polluter liable, initiate cleanup or conservation of contaminated land, and establish conditions for further operations of the contaminated land.

6. What level of cleanup is required?

The applicable law does not have any express requirement on the level of necessary cleanup. As discussed, however, the law identifies acceptable limits to contaminating substances in soil that will be taken into account upon determining the required cleanup of land.

7. Are there different provisions relating to the cleanup of water?

A special law regulating water protection in Ukraine is the Water Code of Ukraine. Additionally, several provisions of the Environmental Protection Law will also apply.

The liability provisions for water cleanup are similar to those applied to contaminated land. It should be noted, however, that in case of insufficient treating of wastewater or water overuse by the relevant entities, such enterprises will be penalized in addition to requiring that they pay a special fee for water use.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

The applicable legislation does not particularly regulate PFAS, therefore, general cleanup requirements will apply.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

It is not a criminal offense to own contaminated land. However, contamination of land may constitute a criminal offense if, as a result of violation of special rules, land is contaminated or damaged with substances, waste products or other elements that are harmful and dangerous to human life, human health or the environment, and such contamination or damage causes danger to the same (Article 239 of the Criminal Code).

This crime is punishable by a fine of up to 4000 nontaxable minimum incomes of individuals (amounting to UAH68,000.00, which equals to approximately USD1,863) or with restrictions from occupying certain positions or from conducting certain types of activities for up to three years.

Moreover, in the case such acts caused human fatalities, human mass infection or any other drastic consequences, such crime may then entail imprisonment for up to five years, which may also be followed by the restrictions from occupying certain positions or from conducting certain types of activities for up to three years.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Failure to comply with cleanup requirements will constitute a criminal offense if one evades or fails to carry out decontamination or other recovery measures with the purpose of eliminating the consequences of ecological contamination of land polluted by hazardous elements or irradiation in case it caused human death or other drastic consequences (Article 237 of the Criminal Code).

Such actions are punishable with imprisonment for up to five years, which may also be followed by restriction from occupying certain positions or from conducting certain types of activities for up to three years.

11. Can the legal entity be held liable?

The legal entities cannot bear criminal liability, however, they are responsible for compensation for all losses suffered in connection with land contamination caused by this legal entity.

12. What authority enforces cleanup?

State control and supervision over the operation and preservation of land is carried out by the State Service of Ukraine for Land Survey, Cartography and Cadaster and its territorial agencies.

13. Are there any defenses?

The applicable legislation does not establish any exemptions or available defenses. Defenses may exist in particular cases, depending on the background of the dispute.

14. Can a third party/private party enforce cleanup?

Any third party may inform relevant authorities of contamination of land, negligence or trespass of the environmental legislation and demand that said contaminated land be cleaned up.

15. Can third parties claim damages?

Yes.

General provisions of the Civil Code of Ukraine authorize any person to pursue claims of damages, health harm or other negative aftermath caused by the actions of a legal entity or an individual.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No, there is no such requirement under Ukrainian law.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No, there is no such requirement under Ukrainian law.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No, there is no such requirement under Ukrainian law. However, such investigations may be conducted upon a decision of the parties.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

Upon the conclusion of the sale and purchase agreement of a land plot, all rights and obligations connected to the land plot, including those related to cleanup thereof, are transferred to the purchaser. However, in case the seller is the polluter, the purchaser has a right to compensation from the seller for all losses suffered with regard to the decontamination of the purchased land.

19.1. Under the general law?

Upon the conclusion of the sale and purchase agreement of a land plot, all rights and obligations connected to the land plot, including those related to cleanup thereof, are transferred to the purchaser. However, in case the seller is the polluter, the purchaser has a right to compensation from the seller for all losses suffered with regard to the decontamination of the purchased land.

19.2. Contractually?

Parties to the sale and purchase agreement of a land plot are free to set provisions regarding the guarantees of the seller with regard to the condition of the land, its obligation to compensate for damages caused by the land defects, to perform cleanup, as well as to establish other conditions regarding cleanup and compensation for the improper condition of the land plot, except those that are directly established by legislation.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

None.

Latin America

Argentina

Santiago Maqueda

by Baker & McKenzie Buenos Aires

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Under Argentine laws and regulations, there are no national or local statutes specifically and only relating to land contamination.

However, both Federal General Environmental Law No. 25,675 (*Ley General del Ambiente*) and Federal Hazardous Waste Law No. 24,051 (*Ley de Residuos Peligrosos*) provide for general environmental protection principles and a special liability regime for environmental contamination, which are applicable to land contamination. At the local level, statutes like Law No. 14,343 of the Province of Buenos Aires, Law 7,343 of the Province of Córdoba, and Law No. 6177 of the Autonomous City of Buenos Aires regulate the management of contaminated sites and environmental contamination and establish certain remediation procedures for contaminated sites.

Furthermore, there are statutes and regulations at the local level in multiple Provinces which provide both general environmental regulations and special liability regimes, procedures and penalties, as well as regulations on specific matters such as certain kinds of waste, specific categories of substances, and potentially environmentally impactful activities, all of which could apply to cases of land contamination.

2. Is there a definition of contaminated land?

There is no express definition of contaminated land at the national level. However, Executive Order No. 831/93 (that regulates Federal Hazardous Waste Law No. 24,051) provides certain guidelines regarding soil quality to determine the existence of contaminated land.

At the local level, several Provinces have statutes defining environmental contamination and contaminated sites broadly, categories which encompass and include contaminated land, as follows:

- Law No. 14,343 of the Province of Buenos Aires (where a considerable number of industries are located) defines contaminated sites as "those whose physical, chemical and biological characteristics have been negatively altered by contaminating substances of human origin, in concentrations representing a risk to human health and/or the environment in view of the present or projected use of the site and its surroundings".
- Law No. 6177 of the Autonomous City of Buenos Aires defines contaminated sites as "real estate in which the soil, subsoil and/or subterranean water have been altered negatively in their chemical characteristics by the presence of contaminating substances of anthropic origin, in concentrations that, in view of the present or projected use of the sire and its surroundings and the Environmental Quality Guidelines, represent a risk to human health and/or the environment based on the evaluation carried out by the Applying Authority".

Law 7,343 of the Province of Córdoba defines environmental contamination as "the addition of materials and waste energy to the environment when these, by their mere presence or activity, provoke, directly or indirectly, a reversible or irreversible loss of the normal conditions of ecosystems and their components, translatable as negative and undesirable sanitary, aesthetic, economic, recreational and ecological consequences".

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

There are no specific statutes related to the cleanup or remediation of contaminated land. However, Section 41 of the National Constitution and Federal General Environmental Law No. 25,675 set forth the general obligation to remediate any environmental damage that has been caused, and specific contaminating activities or substances may have their own federal or local regulations.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

As a general principle, Federal General Environmental Law No. 25,675 establishes that whoever causes environmental damages shall be held strictly liable for restoring the environmental situation to its original condition prior to the damage. As mentioned above, Section 41 of the Federal Constitution and Section 28 of the Federal General Environmental Law No. 25,675 provide for the obligation of the polluter to clean up and remediate any environmental damage caused. There is no specific legal provision, on the national level, that provides for the imposition of a similar obligation on the actual owner of the contaminated land.

In the Province of Buenos Aires, Law 14,343 defines "responsible parties" as comprehensive of both: (i) the person in charge of the activity that generated the pollution, and (ii) the owner of the land where that activity is performed. Nonetheless, their responsibility is not exactly alike. If the identity of the person in charge of the activity is known, then that person is the sole responsible party according to local regulations. Only in the event that the prime responsible party (person in charge of the contaminating activity) is not found, or its identity is unknown, the owner of the land will become responsible for the characterization and restoration duties.

However, Section 1758 of the Argentine Civil and Commercial Code provides for a strict liability regime for the "owner" or "custodian" of a certain piece of property (e.g., contaminated land), that causes damage to a third party, triggering the obligation to pay for damages caused. Although this provision could be interpreted as imposing liability for cleanup on the owner of the contaminated land, still there is no established case law in this regard.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

If the polluter cannot be found, there is no specific regulation, at the national level, that provides that liability passes to the owner or the occupier. The extent of liability of the owner or the occupier shall be established separately. For example, they could be held liable on the basis of the abovementioned Section 1758 of the Civil and Commercial Code. Please also note that Federal General Environmental Law No. 25,675 provides for a liability principle for environmental damages. This principle sets forth that if the actual extent of the liability cannot be apportioned among different parties, all of them shall be held jointly and severally liable.

However, as aforementioned, on the local regulation, in Buenos Aires, if the identity of the person in charge of the activity is known, then that person is the sole responsible party according to local regulations. Only in the event that the prime responsible party (person in charge of the contaminating activity) is not found, or its identity is unknown, the owner of the land will become responsible for the characterization and restoration duties.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

As a general principle, in cases where the pollution was caused by several entities all of them can be held jointly and severally liable. Only if the actual involvement of each entity can be clearly separated the liability shall be apportioned between the owner and the occupier depending on their own specific responsibility.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

This is a matter that has not been specifically addressed by the legislation. But according to general principles and certain case law, the entities or individuals liable for remediation could be required by courts or administrative authorities to remediate historical contamination if the previous polluters cannot be found or located. Needless to say, this is a matter that must be analyzed on a case by case basis.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The courts or competent administrative authorities shall decide if land cleanup is required in light of any existing evidence. As indicated above, Executive Order No. 831/93 (which implements Hazardous Waste Law No. 24,051) provides certain guidelines of soil quality that, in practice, set forth limits to permissible levels of polluting substances. To determine the existence of pollution, the court might order environmental assessments and other appropriate measures.

6. What level of cleanup is required?

The general legal rule is that the condition of the site must be brought back to the condition it was prior to the contamination. However, the factual and economic feasibility of this rule is analyzed on a case by case basis by courts or competent administrative authorities, and there are usually exceptions admitted in each case.

7. Are there different provisions relating to the cleanup of water?

Executive Order No. 831/93 (which implements Federal Hazardous Waste Law No. 24,051) also provides guidelines for water quality to determine the existence of contamination by establishing allowed limits for polluting substances. Said guidelines vary according to the type of water source involved and the intended use of the water. The abovementioned provisions regarding soil protection also apply to water protection.

In addition to this, several Provinces have Water Codes, or statutes and executive decisions regulating water, that establish lower thresholds for contaminating substances, stricter standards for control, and more punishing procedures and penalties for responsible parties. One such case is the Water Code of the Province of Buenos Aires (Provincial Law No. 12,257), a region where a significant percentage of the country's industries are located.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

Although the use of, importation and commerce in several PFAS substances are restricted or outright forbidden by international treaties such as the Stockholm Convention on Persistent Organic Pollutants

and the Rotterdam Convention on International Trade in Hazardous Chemicals[67], which in Argentina have a standing higher than that of legislated law, there is no threshold for mandatory remediation of PFAS in soil or groundwater in the country.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

To contaminate land is by itself not a criminal offense under Argentine laws and regulations. However, Sections 55 through 58 of Federal Hazardous Waste Law No. 24.051 provide for certain criminal penalties for those who, using hazardous waste (as defined by the referred law), adulterate, contaminate or poison land, posing a danger to individuals' health.

Pursuant to the Criminal Code, the penalties for those who contaminate land in the manner above mentioned range from 3 to 10 years of imprisonment, in addition to a fine ranging from AR$ 10.000 to AR$ 200.000. In the case that a person should die as a consequence of the referred contamination, penalties would range from 10 to 25 years of imprisonment.

If land contamination occurs as a consequence of negligent or reckless conduct (i*mpericia*) in the exercise of an art or profession, or as a consequence of lack of compliance with municipal regulations (*reglamentos u ordenanzas*), penalties range from 1 month up to 2 years of imprisonment. If an affected individual should become ill or die as a result of this conduct, then the penalty would increase, ranging from 6 months to 3 years.

In any of these cases, if the criminal action was produced as a result of a corporate decision, the penalty would apply to persons who participated in the decision, including but not limited to the directors, managers, and trustees, notwithstanding the other criminal penalties that may apply.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Non-compliance with the requirement to clean up is by itself not a criminal offense in Argentina. However, if the requirement was made by a court, failure to comply with such judicial order might constitute, in certain circumstances, a criminal offense.

11. Can the legal entity be held liable?

According to Argentine law, legal entities such as corporations can be held liable for environmental damages, including damages derived from land contamination.

12. What authority enforces cleanup?

Federal General Environmental Law No. 25,675 empowers local first instance courts to enforce cleanup. However, if the environmental resources contaminated are interjurisdictional, federal courts will be the enforcement authority. In parallel with courts, the competent administrative authorities are also in charge of enforcing cleanup requirements.

13. Are there any defenses?

This must be decided on a case-by-case basis. However, as a guideline, Federal General Environmental Law No. 25,675 provides for the release of liability of the "custodian" or "owner" if the damages were caused exclusively as a consequence of a third party's negligence, despite all

[67] For the full list of restricted or forbidden substances see https://www.boletinoficial.gob.ar/detalleAviso/primera/275700/20221114, Annex I (available as a downloadable document).

necessary measures having been taken to prevent such damages, considering the circumstances surrounding the case.

14. Can a third party/private party enforce cleanup?

A third party cannot enforce cleanup unless there is a contractual agreement to do so.

In addition, a third party that is affected by the contamination has sufficient standing to request in court the clean up.

15. Can third parties claim damages?

As a general principle provided by Argentine private law, any and all individuals or legal entities that suffer damages to their person or property are entitled to file an action for damages.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

There are no specific national or local regulations in this regard. However, failure to inform such activities could give grounds to the acquiring party to seek to annul the sale of the land on grounds that relevant information was not disclosed

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No, in Argentina it is not a national legal requirement to register contaminated land and there is no national registry for contaminated land. However, Resolution 515/2006 as amended by Resolution 940/2015 ("Program for the Environmental Management of Contaminated Sites") of the Ministry of Environment and Sustainable Development dictates that the Directorate of Pollution Prevention and Management will coordinate with provincial environmental agencies the implementation of strategies for the prevention, control and recovery of contaminated sites. The Program for the Environmental Management of Contaminated Sites creates a georeferenced database on contaminated sites that are reported by local authorities, sectoral bodies, courts, prosecutors, public defenders and other interested parties.

In addition, several provinces do have specific laws requiring registration of contaminated land. That is the case, for instance, of Law No. 14,343 of the Province of Buenos.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

There is no legal requirement at the national level to conduct investigations for potential contamination upon the sale of property. However, it is customary for buyers of property where an industry operates to conduct investigations for potential contamination. At the provincial level, however, Law No. 14,343 of the province of Buenos Aires regulates the identification and registry of abandoned contaminated sites (environmental liabilities) and the existence of contaminated sites within the province's territory It likewise establishes a mandatory closing audit to be filed before the provincial implementing authority upon the definitive ceasing or transfer of activities. The closing audit shall describe the activities performed at the site and analyse samples of soil and underground waters to determine any existing contamination at the site. If contamination were proved, the responsible party for the contaminating activities would have the obligation to remediate the site.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

No. Neither the transfer nor the voluntary abandonment of hazardous waste by its generator shall be effective vis-a-vis third parties to be released from liability. Therefore, the polluter would still be liable after the sale of the contaminated land.

19.2. Contractually?

Partially. Contractual provisions shall not be enforceable vis-á-vis third parties in order to pass cleanup liability, but they would be enforceable between purchaser and acquirer.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

In order to prevent potential claims for damages in connection with environmental contamination, it is advisable to conduct a thorough technical due diligence on the land. Likewise, it is advisable to include an indemnification clause in the transaction documents by which the seller represents and guarantees to the buyer the nonexistence of any type of contamination within the property limits.

Brazil*

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes. There are federal and state regulations related to land, soil and water contamination.

According to the Brazilian Federal Constitution of 1988, the federal entities, including the Union, States and Municipallities, have the power to legislate concurrently on environmental matters. Within the scope of concurrent legislation, the Union has jurisdiction to set general rules, not excluding the supplementary jurisdiction of the States.

Currently, the only federal rule regarding land contamination is the National Environmental Council (Conselho Nacional do Meio Ambiente - "CONAMA") Resolution No. 420/2009[68]. This resolution establishes criteria and standard values for soil and groundwater quality, as well as guidelines for the management of contaminated lands, which includes investigation and remediation procedures. The Resolution No. 420/2009 was inspired on São Paulo State Law No. 13,577/2009[69] ("SP State Law") and was partially amended by CONAMA Resolution No. 460/2013[70].

Other federal rules include contaminated land-related issues and are used together with CONAMA's Resolution No. 420/2009, as cited below:

(a) Federal Law No. 6,766/1979[71]: Provides for the Parcelling of Urban Soil. Its worth highlighting Article 3, which prohibits the parcelling of land filled with harmful material before sanitation (Item II) and of polluted areas until their remediation (Item V);

(b) CONAMA's Resolution No. 273/2000[72]: Establishes the need for environmental licensing of retail stations, gas stations, retail system installations, and floating gas stations, and the carrying out of environmental investigations and the adoption of intervention measures, if necessary;

(c) CONAMA's Resolution No. 396/2008[73]: Provides for the classification and environmental guidelines for the framing of groundwater;

(d) Federal Law 12,305/2010[74] (National Solid Waste Policy - "PNRS"): Lays down instruments and guidelines for the management of solid waste, including hazardous waste and its effects to the environment. ;

[68] Available (in Portuguese) at: http://conama.mma.gov.br/?option=com_sisconama&task=arquivo.download&id=601.
[69] Available (in Portuguese) at: https://www.al.sp.gov.br/repositorio/legislacao/lei/2009/lei-13577-08.07.2009.html.
[70] Available (in Portuguese) at: http://conama.mma.gov.br/?option=com_sisconama&task=arquivo.download&id=676.
[71] Available (in Portuguese) at: https://www.planalto.gov.br/ccivil_03/leis/l6766.htm.
[72] Available (in Portuguese) at: http://portal.pmf.sc.gov.br/arquivos/arquivos/pdf/17_01_2011_17.30.47.12d8482d5a7677bddba4bbc18cc3bcbb.pdf
[73] Available (in Portuguese) at: http://portalpnqa.ana.gov.br/Publicacao/RESOLU%C3%87%C3%83O%20CONAMA%20n%C2%BA%20396.pdf.
[74] Available (in Portuguese) at: http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2010/lei/l12305.htm.

(e) CONAMA's Resolution No. 463/2014[75]: Provides for the environmental control of products intended for remediation; and,

(f) Federal Decree No. 10,936/2022[76]:Regulates the National Solid Waste Policy - "PNRS".

At the State level, the São Paulo State Environmental Protection Agency (Companhia Ambiental de São Paulo - "CETESB") issued in 2007 Directive Decision No. 103/2007/C/E/, which provides rules for the management of contaminated land within that State. In July 2009, SP State Law No. 13,577/2009, which establishes guidelines and procedures for the protection of soil quality and the management of contaminated land located in the State of São Paulo, came into force. Among numerous provisions related to the protection of soil quality from contamination, such State Law legally obliges responsible parties for the contaminated land (i.e. the owner or operator, whoever benefits from the property direct or indirectly, among others) to immediately notify environmental and competent authorities when suspicious of contamination is detected. Regulations of the State of São Paulo are relevant because they are reference to other State environmental authorities throughout Brazil.

On 6 June 2013, State Decree No. 59,263, (the "Decree"), which regulates SP State Law, came into force. This Decree, among other relevant provisions, determines that: (i) communication regarding the existence of contamination to CETESB and to the responsible health authority shall be presented (as soon as evidence or suspicions of contamination are detected) through the submission of a Preliminary Assessment Report; (ii) the lack of referred immediate communication to CETESB will be considered an aggravating circumstance in the application of penalties.

Another relevant aspect included in the Decree concerns the obligation of those responsible for the contaminated land to present warranties (insurance bond, environmental insurance or bank guarantee) in the amount corresponding to 125% of the estimated cost of the Intervention Plan. The Decree also establishes the CETESB's obligation to communicate the District Attorney's Office about the existence of severe instances of noncompliance (characterized by noncompliance with the imposed requirements, technical disability or bad faith of the environmental expert responsible for the project), in order to investigate the facts.

According to the Decree, any action or omission contrary to its provisions shall be considered an administrative environmental violation that will be subject to administrative penalties. In addition to confirming the penalties provided by SP State Law, the Decree authorizes CETESB to stipulate daily fines in the case of continuous infractions in the amount limited to 10,000 Unidade Fiscal do Estado de São Paulo (UFESPs) per day, as well as sets forth that simple fines may be imposed in an amount ranging from 4 to 4 million UFESPs (limited to BRL 50 million).

São Paulo's environmental legislation is historically considered as a trend for the other states in the country. Therefore, following the publication of SP State Law, the states of Minas Gerais, Rio de Janeiro and Rio Grande do Sul also published their own legislation about contaminated land and several states are working on specific regulations related to this matter based on São Paulo's existing rules.

It is also important to mention the Bill of Law No. 2,732/2011, which aims to establish guidelines for preventing soil contamination, as well as to create the Contribution for Intervention in the Economic Domain on Hazardous Substances and the National Fund for the Decontamination of Contaminated Orphan Areas. The bill is currently under evaluation by the House of Representatives and, if it is approved, it will represent an important regulation at national level.

[75] Available (in Portuguese) at: http://conama.mma.gov.br/?option=com_sisconama&task=arquivo.download&id=679.
[76] Available (in Portuguese) at: https://www2.camara.leg.br/legin/fed/decret/2022/decreto-10936-12-janeiro-2022-792233-publicacaooriginal-164412-pe.html.

Besides that, CETESB's Board Decision No. 125/2021/E establishes the standard values for quality, prevention and intervention on soil and groundwater. It takes into account the risks that may be provoked to human health and must be observed by companies for submission of reports to the environmental agency in contaminated land licensing.

finally, the National Council of the Prosecutor's Office published a guideline that provides with the valuation of environmental damage. This is a work focused on studies of methods for valuing environmental damage, especially those most used by prosecutors and by institutions, public and private, with notable specialization in the practice of environmental protection. It is important to highlight that this guideline is just a form of valuation and that courts and the Prosecutor's Office itself can use other guidelines.

2. Is there a definition of contaminated land?

The National Policy for Solid Waste (Federal Law No. 12,305/2010) defines "contaminated area" as a site where there is contamination caused by the regular or irregular disposal of any substances or waste.

In addition, there is a broad definition of 'pollution' provided by the Federal Law No. 6,938/1981[77] ("National Environmental Policy Law") that may also apply to cases of land contamination. According to the National Environmental Policy Law, pollution is the "*deterioration of environmental quality resulting from activities that directly or indirectly: (i) impair the health, safety, or well-being of the population; (ii) create adverse conditions for social and economic activity; (iii) have an adverse effect on flora and/or fauna of a region; (iv) affect the aesthetic or sanitary conditions of the environment; and (v) discharge energy or matter in conflict with established environmental standards*" (Article 3).

Also, CONAMA No.420/2009 defines contamination as "the presence of chemical substance(s) in the air, water or soil, resulting from human activities, in concentrations such as to restrict the use of this environmental resource for current or intended uses, defined based on risk assessment to human health, as well as to assets to be protected, in a standardized or specific exposure scenario" (Article 6, V).

Under state regulations, SP State Law defines contaminated land as "*an area, land, place, facility, edification or building that contains material in concentration or quantity that cause or may cause harm to human health, to the environment or to another asset subject to protection*" (Article 3, II).

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes. At the federal level, CONAMA Resolution No. 420/2009 provides for the remediation of contaminated land.

At the state level, the CETESB's Decision No. 38/2017/C establishes guidelines for the investigation and management of contaminated land, while SP State Law and the State Decree establish rules for the protection of soil quality and management of contaminated land located in the State of São Paulo.

In addition, CETESB has developed a guidance document that defines the standard values for soil and groundwater quality. Such ruling has been updated on 12 December 2021 (CETESB's Decision No. 125/2021/EI).

Also, Technical Instruction No. 039/2017 presents the administrative procedures and attributions regarding the application of the *Procedure for the Protection of Soil and Water Quality Underground, Procedure for Management of Contaminated Areas and Guidelines for the Management of*

[77] Available (in Portuguese) at: https://www.planalto.gov.br/ccivil_03/leis/l6938.htm.

Contaminated Areas in the scope of environmental licensing, approved by through CETESB's Decision No. 038/2017/C.

Some other States also have regulations on the matter.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The Brazilian Federal legislation does not have a specific provision on who is primarily responsible for the clean-up in case of environmental contamination. The *propter rem* institute (liability related to the ownership of the property) exists in the Brazilian legislation, but in most cases the environmental agencies turn against the polluter to remediate the area, being the legal entity operating or in possession of the area that tends to be the party first requested.

According to the Brazilian National Environmental Policy (Federal Law No. 6,938/1981), "polluter" is defined as the individual or legal entity, private and public, that is directly or indirectly responsible for an activity that causes environmental damage (Article 3, IV). Therefore, a polluter's successor or whoever contributes to the damage may also be liable for damages.

Such Law also establishes strict civil liability for polluters, which means that the polluter is obliged to indemnify or repair the damage it caused to the environment and the public regardless of its fault, degree of care or intent.

Please note that in the State of São Paulo – the pioneer State in contaminated land management regulation – there are specific provisions regarding the responsibility for the clean-up of contaminated land. SP State Law attributes joint and strict liability to (i) the polluter and its successors, (ii) the land owner, (iii) the tenant, (iv) the actual possessor, and (v)whoever else benefits directly or indirectly from using the contaminated land.

The State of São Paulo's Environmental Agency (CETESB) has also issued Technical Information No. 39/2017, in which it defined the following order to be preferable observed for responsibility in cases of contaminated areas: (i) the polluter and its successors; (ii) who benefits directly or indirectly from the contaminated land; (iii) the land owner; (iv) the tenant; and (v) the effective possessor.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

As mentioned above, according to the National Environmental Policy Law, the polluter's successor or whoever contributes to the damage may also be liable for damages. Environmental liability is also considered as *propter rem*, which means that is transferred along with the property. Therefore, if the immediate polluter cannot be found, it is likely that these other parties are held liable.

In the State of São Paulo, due to the provision of joint liability between the polluter and its successors, the land owner, the tenant, the actual possessor, and whoever else benefits directly or indirectly from using the contaminated land, these other parties can be held liable in case the polluter cannot be found.

SP State Law also establishes that, in case it is impossible to identify or locate the person legally responsible for a contaminated area, or if that person does not comply with its legal obligations, the environmental agency must contact the Property Registry Office aiming the disclosure of the contamination of the area, along with other information regarding the property's record.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

Brazilian environmental legislation does not provide specific requirements on how the clean-up liability may be allocated among those involved.

Regarding the environmental civil liability (obligation to repair the damage), it should be attributed to the one that caused the environmental damage and, for the characterization of liability, the existence of the damage and the link of causation between the action or omission of the responsible party and the said damage are sufficient. If there is more than one polluter, the division of liability will probably be defined in a case-by-case basis.

In addition, please note that the understanding that joint liability is distributed among all that caused the damage has been broadly adopted in Brazilian Courts. Therefore, under the joint liability regime, any of the responsible parties may be required to proceed with the payment of the total amount of damages, with the right to proportionally recover the losses from other responsible parties, to the extent of their contribution to the environmental damage.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The liability to clean-up does include historical contamination, especially if the previous polluter cannot be identified/reached. However, if it is technically possible to identify what contamination was caused by each polluter, it is possible to argue before the environmental agencies that each polluter will be liable for the clean-up of its own contamination.

In regards to environmental civil liability (recovery of damages), it is likely that the company that is currently operating at the site is held liable for present and past contamination. The company may try to recover its losses from past owners by enforcing respective contractual clauses with former owners, foreseeing the allocation of past environmental liabilities, or by proving the causality link of the environmental damage to past activities performed at the site.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

CONAMA's Resolution No. 420/2009 establishes the criteria and standard values for soil and groundwater quality as well as guidelines for the management of contaminated land, which include investigation and remediation procedures. In principle, if the existence of components at levels above those prescribed in said resolution is confirmed, some remediation action should be taken.

In addition, in the State of São Paulo, CETESB has developed a guidance document that defines the standard values for soil and groundwater quality. Such ruling has been updated on 12 December 2021 (CETESB's Decision No. 125/2021/E).

CETESB's values and thresholds corroborate the concepts of: quality reference value (VRQ), regarding the values for soil and groundwater; prevention value (VP), regarding the values above which there may be damage to soil and groundwater; and intervention value (VI), regarding the values above which there may be direct or indirect potential risks to human health.

According to CONAMA's Resolution No. 420/2009, the criteria and values used for soil quality evaluation will be analysed through the concepts of VRQs, VPs and VIs. The VRQs of chemical substances shall be established by state agencies after the resolution has been published. Several state environmental protection agencies have been adopting these values for remediation standards. In addition, these agencies have been also adopting the Dutch and the US EPA on a supplementary basis. For groundwater, agencies also consider the Brazilian Health Ministry's Ordinance 2,914, dated December 2011, which establishes drinking water quality standards in Brazil.

Environmental protection agencies may accept clean-ups based on risk assessment that demonstrates the absence of risk to the environment and to human health, considering the future use intended for the property (i.e., industrial, residential, commercial or agricultural).

6. What level of cleanup is required?

If the presence of contaminants exceeding their respective reference values for soil and/or groundwater is confirmed, in theory, remediation activities should be carried out until the existent compounds drop to permitted levels and do not offer a risk to potential receptors.

Environmental protection agencies may accept clean-ups based on risk assessment that demonstrates the absence of risk to the environment and to human health, considering the future use intended for the property (i.e., industrial, residential or agricultural).

However, there is a theory in the state of São Paulo where District Attorneys require remediation of the contamination down to very low levels (aiming at, to the extent possible, reverting the soil and groundwater quality to the status quo ante), despite concurrence from EPA on the risk-based standards mentioned above. As a consequence of this theory, district attorneys have been requesting the payment of compensation for past, ongoing and future non-remediated damage.

7. Are there different provisions relating to the cleanup of water?

In general, the clean-up of water follows the clean-up of lands in regards to the responsibility. At the federal level, CONAMA Resolution No. 420/2009 provides for the acceptable parameters for groundwater, establishes the frequency of monitoring for contaminated water and also foresees the need of a report on the water quality for potentially polluting activities licensing. In parallel, Federal Decree No. 5,440/2005 establishes mechanisms and instruments for the dissemination of information to the consumer on the quality of water for human consumption.

Regarding the water for drinking or sanitary use (human consumption), Brazilian Health Ministry's Directive No. 888/2021 establishes that water destined for human consumption, distributed collectively by means of a system, collective alternative water supply solution, or a water tanker, must be subject to control and surveillance of the water quality. Studies on that are often required.

In addition, Sao Paulo State Decree No. 8,468/1976 establishes that effluents of any nature may only be discharged into the inland or coastal waters, surface or underground provided they are not considered pollutants, according to specific requirements. This is applicable to discharges made directly by the source of pollution or indirectly through public or private pipelines, as well as other transport devices, owned or rented by third parties. In this context, the effluents from any polluting source can only be discharged into the public sewage system equipped with a treatment plant if they comply with certain requirements. Moreover, the Decree also settles different standards and conditions for discharge of effluents depending on industrial use or not.

Besides that, São Paulo State Environmental Agency's Board Decision No. 125/2021/E establishes the standard values for quality, prevention and intervention on soil and groundwater. It takes into account the risks that may be provoked to human health and must be observed by companies for submission of reports to the environmental agency in contaminated land licensing.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

In Brazil there are several discussions and studies about the subject and also scientific works that indicate the bioaccumulation of PFAS by application of sulfluramid in agricultural crops. However, there is no specific legislation for its use or limits of concentration in environmental matrices. US EPA standards are usually the reference used by CETESB and other Brazilian environmental agencies.On May 22, 2023 Bill of law No. 2726/2023, which institutes the national control policy of PFAS was presented to the House of Representatives.

In general terms, this bill determines that it is responsibility of the federal, state and municipal public authorities to promote, within the scope of its competences, the implementation of the national policy for the control of PFAS, aiming to **(i)** monitor and control the sources of PFAS emissions in the

environment; **(ii)** establish PFAS concentration limits in water, soil and foods; **(iii)** regulate and supervise the use, production and disposal of PFAS; **(iv)** promote research and development of technologies for the remediation of areas contaminated by PFAS; **(v)** encourage the adoption of sustainable practices in production and consumption of goods and services, in order to reduce the use of PFAS.

Also, the bill establishes that companies and industries that use PFAS in their production processes must present annual consumption and disposal reports of these substances, as well as adopt measures to reduce their use and progressively eliminate their presence in products and production processes.

Considering that the bill has just been presented, its text will still go through the entire legislative process, being subject to changes until it is effectively approved. In the event that the bill is approved as proposed, we understand that a more detailed regulation by the Federal Government will be necessary, to provide more details on its implementation and requirements to control PFAS.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

To contaminate a land may be included in the concept of pollution and may be considered a crime against the environment. The Environmental Crimes Law (Federal Law No. 9,605/1998) establishes in its Article 54 a penalty of imprisonment from one to four years and a fine in case of any form of pollution to such an extent that it results or could result in damage to human health, or that could cause the death of animals or a significant destruction of flora.

The law also foresees an increase in penalties in case the crime: (i) renders a rural or urban area unsuitable for human habitation; (ii) causes water pollution so that it is necessary to interrupt public water supply in a community; and (iii) occurs due to the dumping of solid, liquid or gaseous wastes, or debris, oil, or oily substances contrary to what relevant laws or regulations require.

Also, Section III (Articles 61 to 71) of Federal Decree No. 6,514/2009 foresees penalties related to pollution that can vary from BRL 500,00 (five hundread reais) to BRL 10,000,000 (ten million reais).

Solely owning contaminated land is not considered a crime. However, the owner of a contaminated land has legal obligations that range from communicating the environmental agencies about the contamination to the possible clean up/management of the site's contamination, according to articles 13, 14, and 15 of the São Paulo State Law No. 13.577/2009.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

Yes. The Environmental Crimes Law also foresees penalties for anyone who does not adopt precautionary measures required by competent authorities in cases of serious or irreversible environmental damage. The penalties are the same as those foreseen by the article 54 above mentioned.

In minor cases of non-compliance with the remediation requirements of the contaminated land, the article 70 of the same law is applicable and addresses the administrative environmental violation as any action or omission that violates the legal rules of use, enjoyment, promotion, protection, and recovery of the environment. Its penalties includes warning, fines, confiscation of animals, products, instruments, equipment or vehicles of any nature used in the infraction, destruction of products; suspension of sales and manufacture of products; suspension of constructions; demolition of construction sites and partial or total suspension of activities.

11. Can the legal entity be held liable?

Yes, the legal entity can be held liable in administrative, civil and criminal proceedings when the violation is committed by decision of its legal or contractual representative, or its collegiate body, in the interest or benefit of its entity. Individuals can also respond, along with the legal entity.

12. What authority enforces cleanup?

Environmental protection agencies at State and Federal levels have concurrent jurisdiction to: (i) control the quality of water destined for public water supply and other specific uses; (ii) establish environmental standards and discharge limitations governing air, water and soil; (iii) issue installation and operating licenses for new and existing pollution sources; (iv) monitor polluting activities; (v) apply penalties for violation of pollution standards and limitations; and (vi) request the temporary or permanent shutdown of facilities in cases of serious environmental violations. State and local environmental authorities are authorized to issue standards and requirements that are more stringent than those established by the federal government.

All agencies that are part of the National Environmental System (SISNAMA) have the duty to implement the National Environmental Policy and are responsible for the environmental licensing of companies' activities at different levels of the government. Supplementary Law No. 140, dated December 2011, alters the National Environmental Policy and establishes rules for cooperation among the three levels of government (federal union, state and municipal). Additionally, Supplementary Law defines federal, state and municipal competences regarding administrative actions and imposition of sanctions. According to its Article 13, the licensing proceeding will be performed at only one level of government, which will also be responsible for the inspection of the activity.

The main regulatory agencies are: the Ministry of Environment (MMA), CONAMA, and the Environmental State and Municipal Secretariats and their respective boards. The main inspection agencies are: the Brazilian Environmental and Renewable Natural Resources Institute (IBAMA, which is similar to the US Environmental Protection Agency or EPA), State Environmental Protection Agencies (i.e., CETESB, INEA, FEPAM, etc.) and municipal agencies

Federal and state district attorneys' offices also act on behalf environmental protection, both in civil and criminal spheres.

13. Are there any defenses?

Yes. At the administrative level, the State Environmental Protection Agency usually enforces the clean-ups and imposes warning or infraction notices with penalties in the case of a company's noncompliance. In this case, the company may present an administrative appeal to the agency contesting the sanction imposed. Companies may also defend themselves at criminal and civil levels before the judiciary branch or within civil inquiries.

14. Can a third party/private party enforce cleanup?

Usually, federal and state district attorneys, as well as Brazilian non-governmental organizations (NGOs) registered with Brazilian public record offices have the standing to sue polluters for damages in public civil actions (similar to US class actions), as regulated by Federal Law Nos. 7,347/1985 and 8,078/1990. Although individuals are not entitled to sue under Federal Law No. 7,347/1985, they may sue to recover personal damages under Brazilian nuisance and tort laws. In public civil actions against polluters, the plaintiff may demand that polluters comply with specific performance requirements, such as: (i) ceasing activities that cause pollution; (ii) carrying out site clean-up activities; or (iii) conducting environmental restoration activities. Sometimes, regardless of the level of efficiency of the recovery activities, money damages are imposed on grounds that compensation be granted to remedy past contamination. Money damages recovered in class actions are funnelled into

a special fund for environmental protection projects. A plaintiff may also obtain preliminary or temporary injunctions by producing evidence of the existence of irreparable injury. Punitive damages are not provided for under Brazilian laws. District attorneys may investigate the facts before filing a class action through a "civil inquiry," an investigation procedure aimed at ascertaining damage to the environment. Owners of contaminated land may also be liable under Brazilian property law (the "Neighbour's Law"), which states that owners must eliminate any problems in their property that may endanger the community. The primary enforcement target under the Neighbour's Law will be the operator or entrepreneur that caused the contamination.

15. Can third parties claim damages?

As mentioned above, although individuals are not entitled to sue under Federal Law No. 7,347/1985, they may sue to recover personal damages under Brazilian nuisance and tort laws. This situation usually occurs when the environmental damage also affects other individuals, as a result of the so-called ricochet or reflex damage, in which the harmful activity of the polluter, in addition to affecting the environment, causes damage to third parties, giving them the right to reparation. Such right is provided for in Article No. 942, of the Brazilian Civil Code, which states that the assets of the person responsible for the offense or violation of the right of others are subject to compensation for the damage caused.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No, there is no such obligation in connection with the sale of property. However, in some states, such as São Paulo and Rio de Janeiro, entrepreneurs of activities subject to environmental licensing that have the potential to contaminate soil and groundwater (and therefore, were subject to an environmental license) shall present a conclusive technical report of the soil and groundwater quality in case the company ceases to operate. In this regard, in the state of São Paulo, companies are required to conduct an environmental assessment in case they resume operations, as well as present a "Deactivation Plan" followed by a communication describing the environmental conditions of the area in case of partial and/or total interruption of activities. In addition, such communication must also indicate the measures to be taken to restore the environmental quality of the property area, if it is necessary. The provisions applicable regarding this matter within the state of São Paulo are stablished in Decree No. 59,263/2013. The state of Rio de Janeiro has a specific procedure for the closure of potentially polluting or degrading activities. The state ordinance lists some activities for which the Term of Closure must be obtained. This Term of Closure is the title issued by the environmental agency that evidences the conclusion of all environmental obligations and requirements made by such agency, as established by the State Decree No. 46,890/2019.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Under Brazilian federal regulation there is no expressed obligation to register the declaration of contaminated lands in the Land Registry. The regulation establishes only the need of annotation of decisions, appeals and their effects, which have as their object registered or recorded acts or titles. CONAMA Directive No. 420/2009 establishes that the competent environmental agencies are obliged to publicize in their institutional platforms information on identified contaminated land and their main characteristics.

However, some states have imposed the registering obligation to the contaminated land's legal responsible. It aims to publicly disclose information that may be of general interest to the population. SP State Law expressly imposes the legal responsible to proceed with an annotation in the respective

Land Registry once the site is classified as Contaminated Land or a Remediated Area for Declared Use. In Santa Catarina State, CONSEMA Resolution No. 98/2017 establishes that all use restrictions verified after the recovery of the contaminated land must be registered in the Land Register.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No, there is no such obligation in connection with the sale of property. However, in order for a buyer to contractually stablish limitation to the potential liability as a current owner, it is recommended to complete at least a Phase I Environmental Site Assessment prior to the acquisition. SP State Law - the pioneer State in contaminated land management regulation - requires the "legal responsible" for businesses to disclose any suspicious or indication of contamination. So, once this information is held by the legal responsible, he falls under the disclosure obligation and other studies might be required.

The Brazilian urban land division law does not allow land division on land that has been grounded with substances that are harmful to public health, without previously being sanitized, which indicates that for such areas it is very relevant to conduct an environmental investigation.

In addition, in some states (e.g. São Paulo, Rio de Janeiro, etc.) entrepreneurs of activities that have the potential to contaminate soil and groundwater (and therefore, were subject to an environmental license) shall present a conclusive technical report of the soil and groundwater quality in case the company ceases to operate, as well as indicate the measures to be taken to restore the environmental quality of the property area, as necessary. In case companies resume operations, the environmental assessment is also required.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

Federal law imposes clean-up obligations to the polluter. The polluter's successor or whoever contributes to the damage may also be held liable for damages. The civil liability for environmental damages is also considered propter rem - connected to the ownership of the property - which means that in case of transfer of the property, the obligation to meet clean-up standards will be transferred along with the ownership, but it does not exclude the responsibility of the previous owner or the polluter.

As mentioned above (item 4.1), the Sao Paulo State regulation, which tends to be followed by other states, imposes the responsibility for clean-up obligations jointly to the causer of the contamination and his successors, owner of the area, superficiary, holder of effective possession and whoever benefits directly or indirectly from it.

19.2. Contractually?

Yes. It is possible to allocate liability contractually. Such allocation, however, is not enforceable before governmental authorities or third parties. Therefore, environmental agencies and district attorneys may seek the recovery of the environmental damage from the polluter and/or from the acquirer of the property, individually or jointly. In the case of a contractual allocation of the liability, the party that contractually is not to be considered liable, but has been procured by environmental authorities, may seek indemnification before the party contractually responsible.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Brazilian environmental legislation does not provide specific requirements on succession of liability. This issue must be reviewed under the environmental liability regime of the law in connection with the corporate law succession requirements. As mentioned above, the National Environmental Policy Law

established strict civil liability for polluters and the role of state and federal district attorneys in suing polluters for causing damage to the environment. Thus, a polluter is obliged to indemnify or repair the damage to the environment and to the public, regardless of the level of its fault, degree of care or intent. According to the same law, a polluter is the individual or legal entity, private and public, directly or indirectly responsible for an activity that causes environmental damage (Article 3, IV). It is important to note that there is no statute of limitations for claims on environmental damage. Joint and several liability means that each individual party is wholly liable for all parties' liabilities. Thus, where there is joint and several liability, any of the responsible parties may be sued for the entire amount of damages, with the right to proportionally recover the losses from other responsible parties. The polluter's successor or whoever else contributes to the damage may also be held liable.

Criminal liability in Brazil, until 1998, has not affected the company itself, but only the individuals who own and/or hold management positions. The Federal Environmental Crimes Law, which was enacted in 1998 (Law No. 9,605/1998; see below), provides for administrative and criminal sanctions against legal entities and individuals violating its provisions regarding polluting activities and the protection of natural resources. Other environmental criminal law requirements include Article 15 of Law 6,938/1981 and the Criminal Code's provisions regarding pollution of potable water. As a general rule, there is no criminal liability succession under Brazilian law, because a crime can be attributed only to the individual who has caused it. Different from the environmental civil liability, in criminal liability there is the need to assess the fault, degree of care or intent of the agent conducting the crime. Acquisition of Shares or Quotas In general, in cases of acquisition of shares or quotas, the buyer will fully inherit the civil environmental liabilities. The polluter's successor will not inherit criminal liability for individuals. Although the successor remains liable before authorities and third parties, civil and administrative environmental liability can be allocated between the seller and the buyer in the purchase agreement, granting the buyer the right to recover its losses from succession of these environmental liabilities, or exempting the seller from future losses related to environmental damage. Acquisition of Assets In transactions structured as acquisition of assets, the seller remains the primarily liable entity. Past damage remains the responsibility of the seller, mainly if it continues after the transaction and with enough capital to support claims regarding past environmental liabilities. Under certain circumstances, however, an interpretation may be done in regard to the buyer's succession of civil liabilities if there is evidence that: (i) the buyer has, in practical terms, acquired the business of the seller; or (ii) the sale of assets was construed to leave the seller with assets that were not enough to support environmental liabilities resulting from damage caused prior to the transaction.

In addition, some assets may have environmental liability attached to them (propter rem obligations), regardless of the transaction structure. Thus, in the case of purchase of contaminated land, the buyer and the seller will be jointly and severally liable for damage caused to third parties (e.g., migration of pollutants to other properties) as well as for remediation activities. In this case, the buyer could recover its losses from the seller if the civil environmental liability is properly allocated in the transaction.

It is also important to note that, due to the joint and several liability, financers of polluting activities, such as banks for example, may also be liable for environmental damage, as they somehow can contribute to the causing of such damage by providing financial assets to the polluter. With regards to this subject, it is possible the imposition of fines on financers (e.g. banks) that finance such activities. Therefore, it is important that financers conduct a detailed audit to prevent associated risks, such as assuming responsibility arising from the financing of activities carried out in a contaminated land without the implementation of necessary measures for its remediation by the owner.

Chile

Mirco Hilgers

by Baker & McKenzie, Santiago

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Chile's Political Constitution (hereinafter, the "Constitution") guarantees all people the "*right to live in an environment free of pollution*." It adds that "*[t]he State is duty-bound to assure that such right not be affected and to care for the conservation of nature.*"

Furthermore, Law No. 19,300, which regulates the general legal bases related to the environment, rules this constitutional guarantee and establishes the different environmental managing instruments. In this regard, it regulates the liability for damages to the environment.

However, there are no specific provisions regulating contaminated land and its clean-up. Despite this, general fault-based rules of environmental damage apply. Anyone that causes environmental damage to land, or any other part of the environment, must repair the damage and compensate the owner. In the case of a breach of a clean-up obligation, within the context of a project's environmental authorization, non-compliance with said obligation could arise and penalties could apply.

Other key environmental protection standards in Chile are:

- Law No. 20,417, Organic Law of the Superintendence of the Environment, which provides the regulatory framework for environmental compliance and enforcement;
- Law No. 20.600, which creates the Environmental Courts and a special environmental jurisdiction;
- Supreme Decree No. 40/2012, which regulates the Environmental Impact Assessment System (hereinafter, the "SEIA"); and
- Law No. 20,920, which establishes the framework for waste management, extended producer responsibility (under which producers or importers of so-called "priority products" must organise and finance the collection and management of waste generated by these products) and the promotion of recycling, seeking to reduce waste generation and encourage reuse, recycling and other valorisation actions.

There are also other special laws that regulate aspects of environmental protection, such as the Sanitary Code (Decree No. 725/1967), the Native Forest Protection Law (Law No. 20,283) and implementing regulations on the hazardous waste sanitary management and the storage of hazardous substances (Supreme Decree No. 148/2003 and Supreme Decree No 43/2015, respectively).

Although there are several statutes that address different issues relevant to contaminated land, ***Chile does not have one landmark statute that regulates the remediation of contaminated land or provides guidance as to liability and apportioning such liability among multiple liable parties***.

2. Is there a definition of contaminated land?

There is no specific definition of contaminated land, but there is one of contamination. According to Law No. 19,300: "*the presence of substances, elements, energy or a combination thereof in the environment, in concentrations and for periods being higher or lower, as the case may be, than those established in the prevailing laws*".

There is a Methodological Guide for the management of land with potential presence of contaminants, approved by Exempt Resolution No. 406 of 2013, issued by the Ministry of Environment. The guide defines "***land with presence of contaminants***" as "*the place or piece of land geographically delimited in which, through an environmental risk evaluation, relevant risk level for the people or the environment has been determined.*"

According to the same Exempt Resolution, by environmental risk evaluation we mean a "procedure for analyzing the potential contamination present in a given place, the purpose of which is to establish the risk that it poses, in the present or in the future, to the subjects of protection (human populations, ecosystems or other resources), according to the specific characteristics of the case."

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Law No. 19,300 establishes that all projects or activities likely to cause environmental impact must be evaluated for their impact on the environment before the SEIA. Setion 10, Letter o), of the aforementioned law, makes it obligatory to evaluate environmental sanitation projects, among which is the restoration or recovery of areas containing contaminants that cover a surface equal or larger than 10,000 square meters.

Law No. 20,551 establishes how the mining industry must guarantee the closure plan of its respective facilities, with the purpose of ensuring the physical and chemical stability of its installations.

As there is no specific legislation in place, no specific agency is responsible for the investigation and clean-up of contaminated land, or for imposing fines, despite the Superintendence's surveillance powers. However, any person directly affected by environmental damage to their land, or the State Defence Council as state representative, can bring a claim against the polluter, following the terms and conditions set out in Paragraph 4 of Law No. 20,600.

By way of Exempt Resolution 1690/2011, the Ministry of the Environment approved the Methodology for the Identification and Preliminary Assessment of Abandoned Sites with Evidence of Contaminants. This document establishes the risk assessment methodology applied by the ministry throughout Chile in its investigation of abandoned sites for evidence of contamination.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The polluter is responsible and, therefore, the polluter pays for the environmental damage caused by his actions. A polluter who has been found by an environmental court decision to have produced environmental damage is responsible for the restoration, reparation and clean-up of the polluted land.

The system on environmental damage is fault-based: parties are only responsible for their own acts or those of someone acting on their behalf.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

The liability will not be transferred to the new occupant. If the new occupant, however, must recover the land to be able to execute a project, the occupant must abide by general environmental regulations.

An owner or occupier of contaminated land is only liable for his own negligence. They are not liable if they were diligent in avoiding damage to third parties or the environment.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

Section 51 of the Law No 19.300 states that, "*Any person that willfully or negligently causes an environmental damage shall be liable therefore in accordance with this law.*" In this regard, the provisions of extracontractual liability contained in the Civil Code are supplementary law. These rules provide that if two or more people have committed an offense, they shall be jointly liable.

Once the court determines the existence of environmental damage, it will order its repair to those responsible. The affected may ask for compensation, if applicable.

A party can limit its liability by avoiding the spread of environmental damage. Before acquiring an asset that might be contaminated, it is advisable to carry out due diligence. This will help determine what measures can be taken to avoid or limit the contamination, or stop it from spreading.

In addition, under Law 20,417 it is possible to avoid liability for an environmental damage action by filing a plan with the Superintendence of the Environment.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The liability for historical contamination goes only to the person who has caused the contamination, due to willful misconduct or fault.

Previous owners or occupiers can be liable for contamination they caused, provided an action is brought against them within five years from when the damage becomes apparent.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

It will depend on the intended use of the land. The Ministry of Environment is constantly performing a cadastral survey, for which it has approved a methodology, over lands with potential presence of contaminants. There is no specific law however, that regulates the recovery of contaminated land; therefore, there is no authority empowered to order the clean-up. The need to clean land could be decreed by a judicial order, within the scope of a liability suit for environmental damage. In addition, it could be enforced by an instrument of territorial planning (e.g., urban legislation).

As an example, the Decree No 656 of 2009, issued by the Ministry of Health, prohibits the use of asbestos in construction material.

There are no specific provisions regulating contaminated land and its clean-up. However, general fault-based rules of environmental damage apply. Anyone that causes environmental damage to land, or any other part of the environment, must repair the damage and compensate the owner (Articles 51 to 55, Environmental Law).

In addition, clean-up could arise as an RCA obligation of the project owner. In the case of a breach of a clean-up obligation, non-compliance with the RCA could arise and penalties could apply.

6. What level of cleanup is required?

This depends on the specific rules for the different area types (industrial, natural reserves, etc.). The Law refers to the "rehabilitation of the damage caused."

By "rehabilitation of environmental damage," the Chilean Supreme Court means a material reparation, not a pecuniary compensation as equivalent. The pecuniary compensation is not supported in place of

the environmental restoration. Nevertheless, in the case of irreparable environmental damage, the compensatory condemnations may result in compensatory payments.

7. Are there different provisions relating to the cleanup of water?

Yes, and these measures are primarily in Environmental Law (Law N° 19,300) and the Water Code, plus special environmental provisions. There are rivers for which a water quality standard is established. If this standard is exceeded, the authority must issue a decontamination plan (e.g., Maipo River).

There is no specific legal obligation for a polluter to clean up contaminated water or to pay compensation for water pollution, the law does not determine the obligation of the polluter to repair, on his own initiative, the environmental damage done. However, a polluter can be pursued through an environmental action or civil punishment. In this context, the polluter may be able to limit its liability through filing a restoration plan.

The following national and international general regulations govern the discharge of wastewater and the protection of water resources:

- the International Convention for the Prevention of Pollution by Ships (MARPOL 73/78);
- the International Convention on Oil Pollution Preparedness, Response and Cooperation and its annex;
- the International Convention on Civil Liability for Oil Pollution Damage;
- the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, along with Annexes I to III thereto;
- the Protocol Concerning the Convention on the Prevention of Sea Pollution by Dumping Waste and other Substances 1996;
- Decree Law 2222/1978, which established the Navigation Act (applicable to national navigable waters);
- Supreme Decree 1/1992, which established the Regulation for Aquatic Pollution;
- the Water Code (DFL 1122/1981); and
- the Fisheries and Aquaculture Law (18.882/1989).

In addition, the following environmental discharge emission standards apply:

- Supreme Decree 90/2000 – Emission Standards for the Regulation of Pollutants Associated with the Discharge of Liquid Waste into Marine Waters and Continental Surface Waters;
- Supreme Decree 46/2002, which regulates emission standards of liquid waste into groundwater; and
- Supreme Decree 609/1998, which establishes emission standards for the regulation of pollutants associated with discharges of liquid industrial waste into sewage systems.

Finally, the following environmental quality standards also apply:

- Secondary Standards of Environmental Quality for the Protection of Surface Continental Waters of Rivers – Valdivia (Supreme Decree 1/2015), Biobio (Supreme Decree 9/2015), Maipo (Supreme Decree 53/2014) and Serrano (Supreme Decree 75/2010); and

- Secondary Standards of Environmental Quality for the Protection of Surface Continental Waters of Lakes – Villarrica (Supreme Decree 19/2013) and Llanquihue (Supreme Decree 122/2010).

The administrative consequences of non-compliance with water pollution regulations vary depending on the type of violation and the applicable regulation. Breaches of environmental discharge emission standards are enforced by:

- the Superintendence of the Environment, which can impose monetary fines or order the temporal or definitive closure of the project or revocation of the applicable licence; or
- the Sanitary Public Utility Superintendence.

Breaches of the Water Code are enforced by the General Water Bureau and may result in:

- monetary fines;
- temporary suspension of the project;
- total or partial closure of the site; and
- the imposition of corrective measures.

Parties which have been affected by a breach of the water pollution regulations and seek compensation for damages can file a civil lawsuit for tortious liability before the civil courts.

With respect to criminal liability, the Fisheries and Aquaculture Law establishes that the unauthorized release of any chemical, biological or physical pollutant into the sea or a river, lake or other water body that causes damage to hydrobiological resources is unlawful and subject to criminal penalties (ie, imprisonment and fines), in addition to administrative penalties.

Furthermore, on May 15, 2023, in the context of the parliamentary discussions of the bill No. 13204-07, which amends various legal bodies to expand the criminal liability of legal entities and regulate the exercise of criminal action with respect to the crimes against the socioeconomic state, the Executive is now ready for the Bill's enactment into law.

The Bill modifies the Penal Code, introducing a title called "Crimes against the environment". It criminalizes and punishes those who, without having submitted their activity to an environmental impact assessment, knowing that they are obliged to do so, carry out any of these activities:

- ***Discharge polluting substances into marine or inland waters;***
- ***Extract continental waters, whether surface or subway, or maritime waters;***
- ***Dump or deposit polluting substances in the soil or subsoil, continental or maritime;***
- ***Dump soil or other solids into wetlands;***
- Extract components from the soil or subsoil.
- Release polluting substances into the air.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

No, there is no specific regulation regarding the contamination of Per- and polyfluorinated alkyl compounds. Thus, the general law related to contamination applies.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

In Chile, a "crime" against the environment itself does not exist. Once environmental damage is produced, a civil action is granted to make reparations to the damaged environment, in addition to the "ordinary compensation action," which can be filed by the affected party.

However, on May 15th, 2023, the Congress approved the Bill to Systematize Economic Crimes and Attempts against the Environment, which incorporates to the Penal Code a new set of environmental crimes. These carry penalties ranging from 61 days to 5 years of imprisonment for crimes of mere danger, and up to 10 years of imprisonment for those crimes that generate damage. Additionally, mandatory fines ranging from 120 UTM (approx. USD$ 9,500) to 120,000 UTM (approx. USD$ 9,530,000) are established.

Among these new environmental crimes, there are some crimes that punish specific conducts (e.g., omission of environmental impact assessment) or that protect certain ecosystems (e.g., extraction of water in areas of temporary reduction or water scarcity). Notwithstanding the above, the incorporation of criminal types that punish general attacks against the environment, such as the crime of environmental pollution and, if applicable, the crime of negligent or imprudent pollution, is a novelty in our country.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

In the case of a contaminated soil recovery project that has been submitted for environmental evaluation, corresponding environmental norms must be fulfilled. Fulfilment of the resolution that authorizes the project is regulated and sanctioned by the Superintendence of the Environment. In the case of judgment for environmental damage that orders the repair of the environment, its fulfilment is guaranteed and there is offense associated with the failure to comply.

The penalties related to non-compliance with environmental regulations or RCAs may be:

(a) A written warning;

(b) A fine of one to ten thousand annual tax units[78];

11. Can the legal entity be held liable?

Chilean legislation dictates that either a person or a legal entity, in any of its forms, can be responsible for environmental damage or the breach of environmental legislation. This liability is extended to the company's representative, which is a general environmental liability regime by which any party that negligently or wilfully causes any environmental damage must respond to restore the damage caused.

Nonetheless, under certain exceptional circumstances, directors or other officers may be personally liable for breaches of environmental laws or regulations. An example of this is found in Article 34 of Law No 20,551, Mine Closure Law, which establishes the personal responsibility of the legal representatives of the company for concealing the abandonment of a mining site: "*The company representatives of a mining industry and those who are declared responsible for breaching the execution of a closure mining plan will be sanctioned with a fine of 100 to 1,000 monthly tax units*"[79]. The possible penalties that can be imposed are generally of a civil nature, such as monetary penalties.

[78] The value of one Annual Tax Unit (UTA), as of June 2023, is equal to approximately $947.67 USD.
[79] The value of one Monthly Tax Unit (UTM, as of June 2023, is equal to approximately $78.97 USD.

Chile has no systematic framework governing criminal liability for environmental damage. However, on May 15th, 2023, the Congress approved the Bill to Systematize Economic Crimes and Attempts against the Environment, which incorporates to the Penal Code a new set of environmental-related criminal offences.

12. What authority enforces cleanup?

The Superintendence of the Environment enforces clean-up in the case of a project submitted for environmental evaluation. Meanwhile, the Environmental Courts do so in the case of a lawsuit for environmental damage.

13. Are there any defenses?

As in other proceedings under Chilean law, the party allegedly responsible for environmental damage will have the opportunity to defend itself and prove its innocence, or the corresponding mitigating factors, in the response to the environmental damage claim.

In addition, under Law 20,417, the Superintendence of the Environment shall exempt from the amount of the fine the person causing environmental damage who, for the first time, denounces to be committing, by himself, any infraction, as long as he fully executes a compensation program approved by said Superintendency.

14. Can a third party/private party enforce cleanup?

In the case of the Superintendence of the Environment, any individual can report noncompliance with environmental authorities. In the case of a lawsuit for responsibility for environmental damage, clean-up can be enforced by any natural or legal entity that has suffered the damage; Town Halls for the acts that occurred in their territory; and the Estate Defense Council.

15. Can third parties claim damages?

Law No. 19,300 regulates the environmental damage reparation action, which may be brought by any person, natural or legal, who has suffered the damage, the municipalities of the land in question, and the state.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

There is no specific legal requirement for a seller to disclose environmental information in either an asset sale or a share sale. However, general rules provide that:

- Parties need to negotiate in good faith and provide appropriate information according to the nature of the transaction (*Article 706, Civil Code*).
- If environmental damage occurs, and the seller knew that it was likely to occur but did not disclose this to the buyer, the seller can be held liable (*Article 1857, Civil Code*). This type of action is known as *vicios redhibitorios*.

The following environmental due diligence measures are recommended when carrying out a land transaction:

- a review of the documentation and titles necessary to prove the validity and legitimacy of the seller's property right (ie, verify whether there are liens on the land, such as mortgages or easements);

- a review of whether the land requires a forestry management plan. Further, if the land entails a conservation lien and is located in a rural area, the buyer should check whether it has an authorisation for land-use change. Finally, the buyer should review whether the land transaction includes water rights and whether third parties have mining rights;
- a review of the communal, intercommunal and regional territorial planning instruments; and
- a preliminary investigation in situ of the land and a preliminary site-specific risk assessment.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

Principles of transparency and full disclosure apply to all administrative procedures, including environmental procedures and permits. The Transparency Law was enacted in April 2009 (Law 20,285). Its main principle is that the administration's acts should be public and that everyone should have the right to access information submitted to state authorities.

The Environmental Law provides that the Evaluation Commissions or the Executive Director of the Environmental Evaluation Service must establish mechanisms that allow the informed participation of the community in the screening process for an Environmental Impact Study (EIA) or a Environmental Impact Statement (DIA), if it is appropriate. This means that, in the case of the EIA, the applicant must publish a summary of the study in a local newspaper containing the project's essential data. The public (whether directly affected by the project or not) can then review the project, and submit comments and observations to the relevant agency within 60 days of publication. The Environmental Evaluation Service must then consider these comments and observations. If it fails to do so, the party making the submission can file an appeal to a superior authority (the Executive Director, in the case of a DIA, or the Ministers' Committee, in the case of the EIA).

Law 20,417 has introduced greater public transparency obligations. The applicant for an EIA or DIA must now transmit, by local radio broadcasts at its own expense:

- The EIA or DIA summary.
- The place where additional background information is available.
- The term for interested parties to file observations.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

Chilean law does not require environmental audits for any type of project or activity. However, the Environmental Evaluation Service[80] has, with increasing frequency, been imposing the requirement of an audit as a condition for building and operating a project. In most cases, companies voluntarily commit to submit themselves to an auditor.

According to Law 20,417, in the case of DIAs, the holder can include, at its sole expense, the commitment of being subjected to an evaluation and certification process concerning compliance with the:

- Applicable environmental regulations.
- Conditions under which the project or activity must be carried out.

This commitment reduces the duration of the evaluation process.

[80] Administers SEIA and interprets the relevant environmental qualification resolution (*Resolución de Calificación Ambiental*) (RCA), which is the name for the Chilean environmental permit.

The Exempt Resolution No. 574, 2012 issued by the Superintendence requires that the owner of a project with a favourable RCA (environmental qualification resolution) must provide the following to the Superintendence:

- All information regarding the RCA description (as an administrative act).
- The name and contact information of the owner or legal representative of the project.

In addition, Exempt Resolution No. 844, 2012 issued by the same administrative authority, requires that the owner of a project with a favourable RCA must provide the Superintendence with information related to the compliance of environmental monitoring measures established in their respective RCA. Penalties for non-compliance are issued by the Superintendence.

Noncompliance of any of these resolutions is subject to penalties from the Superintendence.

The individuals responsible for companies, industries, projects and sources of emissions that are subject to enforcement proceedings:

- Must provide all means necessary to carry out the enforcement proceedings.
- Cannot refuse to provide any requested information.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

The law on environmental liability is fault-based. Therefore, environmental liability is not transferred on either an asset sale or the sale of a company (share sale). A new owner would have to be negligent himself to be liable.

19.1. Under the general law?

No. As said before, the law on environmental liability is fault-based.

19.2. Contractually?

This can be done, but it will have effect only between the parties. Before the authority, only the person who caused the damage remains responsible.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

In the case of known contamination, this situation must be reported to the environmental authorities, with the aim of taking mitigation measure.

Law No. 19,300 regulates the environmental damage reparation action, which may be brought by any person, natural or legal, who has suffered the damage, the municipalities of the land in question, and the state.

Colombia

Camila Jiménez Lara

by Baker & McKenzie, Bogotá

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Political Constitution of Colombia establishes in article 79 that every individual has the right to enjoy a healthy environment and article 80 institutes that the State shall plan the management and exploitation of natural resources in order to guarantee their sustainable development, conservation, restoration, or replacement.

For that reason, a law regulating environmental liabilities was enacted on September 13, 2023. Law 2327, 2023, is a frame law, therefore is expected to be further regulated in the next couple of years. Aspects such as funds used for remediation, liabilities, authorities in charge, records to identify contaminated soil, among others, must be further regulated.

2. Is there a definition of contaminated land?

Law 2327, 2023 defines environmetal liabilites -associated to contaminated land-, as impacts caused by anthropic activities, authorized or not, cumulative or not, measurable, locatable and geographically delimitable, that generate risk to life, human health or the environment. Therefore, land contamination can be classified as an environmental liability and the provisions of this law apply to it.Although Law 2327, 2023 defines environmental liability.

The environmental authorities have defined contaminated land as those lands in which the level of pollution exceeds the applicable standards, therefore such soil cannot be used for a certain use.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

As per Law 2327, 2023, the generator of the environmental damage must be liable for remediation activities.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

As per Law 2327, 2023, cleaning up responsibility may be transferred to the State if the generator does not have the economic resources to assume it, or if cannot be found. This would be considered an "orphan liability". There exists also the possibility that the cleaning up activities be assumed by an operator with environmental obligations as a way of compensation. However, please note that this law requires further regulation.

In certain cases, the cleaning up obligations are established by contractual estipulations between seller and buyer in the frame of a property purchase agreement.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

The liability is joint and several. The State may take action against the two or more responsible parties jointly, or against any one of them at its own discretion.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

No. There are still no rules with respect to who should assume the historical contamination.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

The environmental authority decides whether or not cleanup is required. Although we have regulations specifying limits to certain polluting substances, most of these are not still cover by the regulation, therefore the environmental authorities applies international standards (for example approved by the EPA) for soil contamination. Excepting the city of Bogota, case in which the local environmental authority issued Resolution 2700, 2023 on contaminated sites. It sets out the Methodology for the Standardization of Investigation Criteria for Soil Contamination and Associated Resources and the Guide for Risk Assessment of Contaminated Sites. The standard is based in part on ASTM 2801.

6. What level of cleanup is required?

A **PHASE II environmental study** must be conducted (to determine the contaminant, level of pollution and required cleaning up), and afterwards, a remediation –duly approved by the environmental authority- must be conducted.

7. Are there different provisions relating to the cleanup of water?

No.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

No. International Standards are used.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Yes. If the land has been contaminated as a result of an infraction, the following fines may be imposed:

- daily fines of an amount ranging up to 5,000 times the Colombian monthly minimum wage (approximately USD $1.2 million) -depending on the severity of the violation-;
- temporary or permanent closure of the facility;
- revocation or expiration of the applicable environmental, authorization, concession, permit or registration;
- demolition of constructions at the offender's expense;

- seizure of products or machines used for the environmental infraction, and/or
- rendering of community service.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

No.

11. Can the legal entity be held liable?

Yes.

12. What authority enforces cleanup?

Competent environmental authority.

13. Are there any defenses?

(i) force major; (ii) fact attributable to a third party;

14. Can a third party/private party enforce cleanup?

No.

15. Can third parties claim damages?

Yes.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No, until now. With the implementation of Law 2327, 2023, it is likely that such a requirement be incorporated in the environmental regulation.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

No.

19.1. Under the general law?

No.

19.2. Contractually?

Yes.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

In Colombia, we typically recommend potential purchasers of land to conduct an environmental phase study (I, II and III), with the purpose to identify if the land is contaminated, and how that issue should be resolved between the parties.

Mexico

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Legislative framework

1. Do you have any statutes specifically relating to land contamination?

Yes. Title V, Chapter VI of the General Law for the Prevention and Integral Management of Waste ("Waste Law") contains several provisions that deal with soil contamination liability and remediation requirements. The Regulations of the Waste Law also contains several provisions that deal with these topics

2. Is there a definition of contaminated land?

Although the Waste Law does not define contaminated land, it does contain a definition of "contaminated site," which is "a place, space, soil, water body, installation or any combination thereof that has been contaminated with hazardous materials or waste, which, due to their quantities and characteristics, may represent a risk to human health, living organisms or to the use of a person's goods or properties."

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

According to the Waste Law, a party that causes soil contamination may be primarily liable for such cleanup and may incur administrative, civil or criminal liability. However, owners or occupiers of private land or holders of concessions over federal property are jointly liable for remediation, regardless of fault, and may bring a legal action against the party that caused soil contamination.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

Yes.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

The Waste Law is not specific as to how the liability will be apportioned between these parties. In practice, however, the remediation obligation would fall on the party actually occupying the site.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

There is no legal definition of "historical contamination." The current owner and/or occupier of the property would be jointly liable for the cleanup regardless of which party is at fault and regardless of the length of time contamination has been present at a site.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

There are currently two standards in force regarding soil contamination/cleanup. One is NOM-138-SEMARNAT/SS-2003, which regulates hydrocarbons in soils, and the other is NOM-141-SEMARNAT-SSA1-2004, which regulates heavy metals in soils.

6. What level of cleanup is required?

The required levels of cleanup are specified in the standards.

7. Are there different provisions relating to the cleanup of water?

There are no standards in force regarding groundwater cleanup. However, in many instances, regulators have applied as a baseline the limits established in Standard NOM-127-SSA-1994 applicable to water that may be suitable for human use and consumption.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

No. Mexico has not enacted any PFAS cleanup regulations or standards.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

Owning contaminated land does not generate criminal liability. However, in some specific cases, causing soil contamination may be considered a criminal offense. According to the Federal Criminal Code, a prison term of one to nine years and a fine equivalent to up to 3,000 days (calculated on the basis of revenue, not salaries) may be imposed on whoever undertakes or orders the discharge, deposit or infiltration of hazardous chemicals into the soil or groundwater, causing environmental harm.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

In some cases, the failure to comply with a remediation obligation may generate criminal liability. Under the Federal Criminal Code, a prison term of one to four years and a fine equivalent to up to 3,000 days may be imposed on whoever fails to carry out or comply with any technical corrective or safety measures ordered by an environmental authority to prevent environmental harm, which may include soil remediation activities.

11. Can the legal entity be held liable?

Yes, if the party that is criminally liable was acting under the guidance or instructions of the legal entity. However, there is no piercing of the corporate veil in Mexico.

12. What authority enforces cleanup?

At the federal level, the Federal Bureau of Environmental Protection (PROFEPA) enforces cleanup.

13. Are there any defenses?

Yes. There are administrative appeals available to parties against whom penalties have been imposed. There is also an annulment lawsuit that may be filed before the Federal Fiscal and

Administrative Justice Court. Finally, an amparo lawsuit (a type of constitutional challenge) may be brought against rulings that resolve appeals or annulment complaints.

14. Can a third party/private party enforce cleanup?

Yes, they can, but only through a class action procedure. As of March 2012, it is possible for a group of affected individuals to bring a collective action (similar to a "class action") against a person that has caused soil contamination, for the purpose of forcing him or her to clean up a contaminated site. Collective actions may be brought before Federal Civil Courts by groups of 30 individuals or more, by PROFEPA or by any non-governmental environmental group. In addition, purchase and sale agreements may contain environmental clauses requiring that a seller or purchaser of a site assume responsibility for cleanup if the site is contaminated by hazardous materials or waste. These agreements may be enforced through a judicial procedure.

15. Can third parties claim damages?

Yes they can, but only through a civil individual action or through a collective action.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No. However, a person transferring contaminated land to another must inform the purchaser of the environmental conditions of the property. Similarly, no contaminated land may be transferred without express written authorization from the Ministry of Environment and Natural Resources (SEMARNAT).

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No. However, a person transferring contaminated land to another must inform the purchaser of the environmental conditions of the property. Similarly, no contaminated land may be transferred without express written authorization from the Ministry of Environment and Natural Resources (SEMARNAT).

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

Yes.

19.1. Under the general law?

No.

19.2. Contractually?

Yes

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

The importance of conducting preliminary studies prior to the purchase to determine if the land is contaminated should also be brought to the attention of the potential purchaser. Furthermore, it is important to incorporate adequate indemnity provisions in purchase and sale or lease agreements.

Perú

Nicole Freire

by Estudio Echecopar. Please note that Estudio Echecopar has been operating as a fully independent law firm since 1 July 2025.

Legislative framework

Please note that this review relies solely on general legal provisions on soil contamination and remediation. Mining and hydrocarbon activities have additional reclamation standards that are not included in the scope of our answers.

1. Do you have any statutes specifically relating to land contamination?

Yes. The Ministry of Environment passed Supreme Decree No. 011-2017-MINAM (on 2 December 2017) and Supreme Decree No. 012-2017-MINAM (on 2 December 2017), which regulate the application of the Environmental Quality Standards for Soil ("EQS-Soil"). These environmental quality standards provide a broad framework for projects that may cause or potentially generate a risk of land contamination. Compliance with EQS-Soil is progressive and involves three different phases:

- The identification phase–The objective of this phase is to verify or discard the presence of contaminated sites. It involves two phases: (i) Preliminary evaluation, and (ii) Identification sampling.
- The characterization phase – If EQS-Soil are not being met, then the extent and depth of the pollution must be determined. It involves two phases: (i) Sampling detail and (ii) Environmental and Health Risk Assessment (ERSA). For the second phase, the develop of the aforementioned detailed study is optional, unless the competent authority requests it.
- Remediation Plan development stage – If the characterization phase determines the need to carry out remediation measures, a remediation plan must be develop.

In projects to be developed in areas where past activities could potentially contaminated the soil, the project owner must evaluate the existence of contaminated sites within the direct area of influence of the project, through the execution of the identification phase, within the framework of development of the baseline. Also, they must include in their Environmental Management Instruments, measures to prevent soil contamination.

The project owner with ongoing activities that can potentially contaminated the soil, must evaluate the existence of contaminated sites linked to its activities.

2. Is there a definition of contaminated land?

Yes. EQS-Soil define contaminated site as the area in which the soil contains contaminants from anthropogenic activities, in concentrations that may represent health or environmental risks, because they exceed the Environmental Quality Standards (EQS) for Soil, international standards approved by MINAM or background levels, provided that the latter present values that exceed such standards.

The area identified as a contaminated site may include the underlying groundwater, sediments or other environmental components, which are affected by soil contamination, when located within it.

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

Yes. The regulations establish that whenever the existence of a contaminated site is determined, the title holder of the polluting activities shall file a Remediation Plan to the corresponding authority.

The determination of a contaminated site may arise from the inspection powers of the administration or from the completion of the identification phase.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

The polluter is responsible for cleanup duties, without regard to who owns the contaminated land. Nevertheless, from a practical point of view, there is always a risk for the landowner considering that in some cases he or she is the visible party vis-a-vis neighbours and other stakeholders.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

If the polluter cannot be found, then the liability will not be passed to the landowner or occupier. The responsibility for cleanup is given to whoever conducted the polluting activity.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

This would be determined case-by-case by the authority. There are no specific rules.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

The regulations establish that, if as a result of the identification phase, the existence of contaminated sites generated by a past activity is determined, the owner of the ongoing project or activity does not have the obligation to continue with its evaluation and subsequent remediation, unless it is responsible for said contamination, or has assumed the remediation of the site through a contractual agreement with the person responsible for it.

In the mining and hydrocarbons sectors, specific laws provide that the reclamation due to historical contamination will be the government's responsibility if the polluter cannot be found.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

A site may be determined as contaminated after inspection by the administration or the execution of the identification phase.

The sampling results will have to be compared to EQS-Soil values. If the results show a concentration of pollutants that exceed the EQS-Soil values, the polluter will have to undertake cleanup activities.

6. What level of cleanup is required?

"How clean is clean" is prescribed in the EQS-Soil levels and, exceptionally, in the ad hoc ERSA levels remediation targets.

7. Are there different provisions relating to the cleanup of water?

Yes. Peru has a specific regulatory framework called EQS-Water.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

The threshold for mandatory remediation of PFAS in soil or groundwater refers to the elimination or reduction, to acceptable levels, of risks to human health or the environment associated with site

contamination. It also includes actions to achieve the subsequent use of the site or the restoration of the site to a state similar to that prior to the occurrence of the negative environmental impacts.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

The Criminal Code provides that any person who breaches EQS-Soil regulations and causes or generates a risk of severe damage to the environment will be punished with no less than four but no more than six years of imprisonment (pollution crime). This sanction is focused on penalizing the action of contamination and does not apply to the mere fact of owning contaminated land.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

No. However, failure to comply with cleanup may amount to the crime of polluting the environment.

11. Can the legal entity be held liable?

Legal entities who fail to comply with cleanup and whose contamination amounts to the crime of polluting the environment can be held liable for said crime.

12. What authority enforces cleanup?

For the mining, hydrocarbons, power, fishing and manufacturing, agriculture sectors, the corresponding authority is the Agency for Environmental Evaluation and Enforcement (Organismo de Evaluación y Fiscalización Ambiental or OEFA). For other sectors, the enforcing authority is the specific office of environmental affairs within each Ministry (e.g., for transportation projects, the competent authority is the Directorate of Socioenvironmental affairs of the Ministry of Transports and Communications).

13. Are there any defenses?

Yes. Polluters may invoke causation or statutes of limitation.

14. Can a third party/private party enforce cleanup?

No. Only the authorities may enforce cleanup.

15. Can third parties claim damages?

Yes. Third parties can claim damages if damages result from the contamination of the site.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

No.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

No.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

No.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

Yes. However, even if a party responsible for cleanup may pass his or her cleanup liability to a third party through a contract, it will still be liable vis-à-vis the government for any pollution.

19.1. Under the general law?

Yes.

19.2. Contractually?

Yes.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

No.

North America

USA

John Watson, Jessica Wicha

by Baker & McKenzie, Chicago

Legislative framework

1. Do you have any statutes specifically relating to land contamination?

The Comprehensive Environmental Response Compensation and Liability Act (CERCLA), also known as "Superfund," provides a framework for the cleanup of the release or threatened release of hazardous substances into the environment. CERCLA authorizes the federal government (the US Environmental Protection Agency (EPA)) to remediate a property when immediate action is needed and to bring actions to require cleanup by potentially responsible parties (PRPs). Private parties may also initiate remedial actions to address releases of hazardous substances and may pursue the recovery of costs from PRPs in cost recovery or contribution actions.

- "Release" – Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of hazardous substances into the environment
- "Environment" – Surface water, groundwater, land surface, soil or ambient air
- "Hazardous Substance" – Any "hazardous substance" under the Clean Water Act (excluding petroleum), any hazardous waste under the Resource Conservation and Recovery Act, any "hazardous air pollutant" under the Clean Air Act, and any imminently hazardous chemical designated by the US Environmental Protection Agency (EPA); this definition does not include petroleum, including crude oil.

Individual states also have laws and regulations imposing cleanup obligations to statutorily liable parties. Historically, most state laws mirrored the wide-ranging liability reach of the federal Superfund scheme. In recent years, however, numerous states have abandoned the CERCLA scheme and adopted instead arguably more equitable "polluter pays" laws, limiting liability to those parties actually responsible for site impacts.

2. Is there a definition of contaminated land?

CERCLA imposes liability for the cleanup of contaminated "facilities." A "facility" is defined as:

- any building, structure, installation, equipment, pipe or pipeline, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock or aircraft; or
- any site or area,

where a hazardous substance has been deposited, stored, disposed of or placed, or otherwise come to be located

Statutory responsibility for cleanup

3. Are there any cleanup or remediation laws to deal with in regard to contaminated land?

CERCLA authorizes the federal government to remediate a contaminated property when immediate action is required and to bring enforcement actions to require cleanup by PRPs. Third parties may also remediate sites and pursue other liable parties in cost recovery or contribution claims.

4. If so:

4.1. Who is primarily responsible for the cleanup? (e.g., is it the polluter or the land owner)

CERCLA liability is strict, joint and several, thus exposing non-culpable parties to liability for environmental impacts caused by others. CERCLA imposes liability to four classes of PRPs:

- Current owners and operators of the contaminated property ("facility") (i.e., the landowner);
- Past owners and operators of the contaminated property at the time the hazardous substances were released (i.e., the polluter);
- Generators of the hazardous substances and parties that arranged for the disposal or transport of the hazardous substances; and
- Transporters of the hazardous substances that selected the site where the hazardous substances were disposed of.

Because of CERCLA's wide-ranging liability scheme, any PRP may be held liable for the entire cleanup (i.e., strict liability). Assuming all parties are financially viable, however, the percentage share usually depends on causation, which is fact-specific, with liability issues being resolved in cost recovery or contribution litigation. In fact, a 2009 US Supreme Court decision confirmed that CERCLA liability may be apportioned among PRPs if there are facts reasonably supporting the apportionment. This may result in the US government recovering less than 100 percent of its cleanup costs. Factors that will be considered include the percentage of land within the larger contaminated parcel that was owned or operated by the PRP and the percentage of contamination attributable to the PRP.

4.2. If it is the polluter, what happens if the polluter cannot be found? Is the liability passed to the owner or the occupier?

As discussed in 4.1, the CERCLA liability scheme is strict, joint and several. Accordingly, if the polluter cannot be located or is no longer financially viable, then liability can be passed on to one or more identified PRPs, including the owner and/or operator of the property.

4.3. If the polluters are both the owner and the occupier (e.g., the landlord and a tenant), how is the liability apportioned between them?

Technically, both parties are jointly and severally liable in the eyes of the US government for the environmental impacts. Liability among such parties will likely be apportioned based on a variety of factors, including, among others, the responsibility of each party for the release of hazardous substances, the extent of cooperation of the parties in addressing any releases, and the ability of the parties to pay for the cleanup.

4.4. Does the liability to clean up include historical contamination? If not, who pays for this cleanup?

Yes, CERCLA liability is strict and retroactive, therefore imposing liability for past acts regardless of fault.

Cleanup standards

5. How is it decided whether cleanup is required? For example, are there regulations specifying limits to polluting substances that are permissible or is some form of risk assessment carried out?

EPA relies on generic screening levels to assess cleanup obligations at contaminated sites. Risk assessment methodologies are also regularly utilized to develop site-specific standards for remediation activities. Most states have well-developed risk-based remediation programs that rely on

generic residential and industrial cleanup objectives and also allow parties to develop alternative standards through formal risk assessments.

6. What level of cleanup is required?

Cleanup standards are typically tied to the nature of the property use – residential versus industrial – and are ultimately based on whatever risks are posed by contaminants present at a site.

7. Are there different provisions relating to the cleanup of water?

Generic and risk-based cleanup standards also exist for groundwater cleanups. In many instances, prohibitions on the use of groundwater will eliminate any obligations to remediate identified impacts.

8. Is there a threshold for mandatory remediation of PFAS in soil or groundwater? If yes: To which PFAS substances does it apply?

CERCLA does not yet regulate PFAS as a "hazardous substance." In September 2022, EPA proposed to regulate two types of PFAS – PFOA and PFOS – as "hazardous substances" under CERCLA. Public comments were accepted on the proposal until November 2022. EPA is currently reviewing the public comments and a final rule is expected during 2023. It is expected that the final rule will result in PFOA and PFOS being regulated similar to other CERCLA hazardous substances, consistent with the various considerations outlined above.

A small but growing number of states have developed cleanup standards for certain PFAS, including Michigan, New Jersey, Pennsylvania and Washington. State regulations vary as to the types of PFAS chemicals that are regulated and the cleanup standards that are in place.

Penalties, enforcement and third-party claims

9. Is it a criminal offense to contaminate land or to own contaminated land? If so, what are the penalties?

CERCLA authorizes EPA to criminally prosecute a person in charge of a vessel or facility who fails to report to the agency a release of a reportable quantity of a hazardous substance as soon as the person has knowledge of the release. The person can be fined or imprisoned for up to three years (or up to five years in the case of a subsequent conviction), or both. CERCLA also authorizes EPA to criminally prosecute the following parties who fail to report to the agency the unpermitted storage, treatment or disposal of hazardous waste: current owners or operators of the facility; former owners or operators at the time of disposal of the hazardous waste; and transporters of the hazardous waste that selected the site where the hazardous substances were brought. EPA may impose a fine of up to USD10,000 or imprisonment for up to one year, or both.

10. Is it a criminal offense not to comply with the requirement to clean up? If so, what are the penalties?

CERCLA imposes civil liability, but not criminal liability, for failure to comply with a required cleanup.

11. Can the legal entity be held liable?

Yes, the primary liable party will typically be the corporate entity that owns or operates the site, although individuals could also be deemed liable parties under appropriate circumstances.

12. What authority enforces cleanup?

EPA and relevant state environmental agencies enforce cleanup.

13. Are there any defenses?

A PRP may avoid CERCLA liability if it can establish that the release of hazardous substances was caused solely by an act of God, act of war, or act or omission of a third party with whom the PRP has no contractual relationship. In addition to these affirmative defenses, CERCLA provides certain exemptions from the far-reaching liability scheme, including the "innocent landowner," "contiguous property owner," "bona fide prospective purchaser," and "secured creditor" exemptions. To take advantage of these exemptions, the landowner must comply with various pre- and post-acquisition obligations.

- Innocent Landowner Defense – A current landowner may avoid CERCLA liability if, at the time the party acquired the property, it did not know and had no reason to know that any hazardous substances were released on the property. To establish that the landowner did not know and had no reason to know of the release, the landowner must have conducted all appropriate inquiries into the prior ownership and uses of the facility before acquiring the property, with the results of that inquiry resulting in no information on the presence of the environmental impacts.
- Contiguous Property Owner Exemption – A current landowner may avoid liability for contamination migrating from an adjacent parcel if, at the time of acquisition, the party had no reason to know of the release. Similar to the innocent landowner defense, the owner must have undertaken all appropriate inquiry into the past uses and ownership of the property prior to property acquisition.
- Bona Fide Prospective Purchaser Exemption – A current landowner may avoid CERCLA liability even if it purchased the property with knowledge of the contamination. Pre-acquisition requirements include conducting all appropriate inquiries into the prior ownership and uses of the facility by commissioning a Phase I Environmental Site Assessment in accordance with the current ASTM standard. A new ASTM standard was issued in November 2021, which provides clarification of key terms and adds requirements for when portions of the report must be updated to remain valid. Additionally, the new ASTM standard adds specific reference to PFAS. In February 2023, EPA issued a final rule determining that this new ASTM E1527-21 standard satisfies "all appropriate inquiries" for purposes of the Bona Fide Prospective Purchaser Exemption. Post-acquisition continuing obligations include cooperation with PRPs on site cleanup work and the management of imminent risks to the environment or health of site occupants.
- Secured Creditor Exemption – A lender that takes indicia of ownership of a contaminated property by way of its lending activities or foreclosure is generally exempt from CERCLA liability

14. Can a third party/private party enforce cleanup?

CERCLA authorizes any person to bring a citizen suit against a PRP or the EPA to enforce a cleanup pursuant to the statute.

15. Can third parties claim damages?

Third parties have the right to pursue claims in cost recovery under Section 107 of CERCLA or contribution under Section 113 of CERCLA to seek the management of past costs and the allocation of future costs associated with the cleanup of impacted sites from those parties deemed to be responsible for any contamination.

Acquisition of contaminated land

16. Is it a legal requirement in your jurisdiction to inform about contaminating activities that have been carried out in the property and include such information on the contract of sale?

US law does not require that a potential buyer conduct an environmental investigation prior to the purchase of property. However, as discussed in the response to Question 11, in order for a buyer to avoid potential CERCLA liability as a current owner, it must have completed a Phase I Environmental Site Assessment in accordance with the ASTM standard prior to the acquisition.

17. Is it a legal requirement in your jurisdiction to register the declaration of contaminated land in the Land Registry?

US law does not require a property owner to register the contamination status of property as part of the property records. Property use limitations (i.e., institutional controls) established as part of a cleanup of a contaminated site under a state or federal program are required to be recorded on the deed to the property.

18. Is it a legal requirement in your jurisdiction to conduct investigations of potential contamination in connection with the sale of property?

Federal US law does not require an investigation of potential contamination in connection with the sale of property. Two US states – New Jersey and Connecticut – have passed "transfer-triggered" laws, which require the sellers of certain types of property – typically industrial property and properties that manage significant quantities of hazardous materials – to investigate environmental conditions prior to a sale. If contamination is identified during that site investigation, then the seller must pursue remediation in.

19. Can a party responsible for cleanup under statutory law pass its cleanup liability to the purchaser?

19.1. Under the general law?

No. Agreements to transfer environmental liabilities are not enforceable against the government.

19.2. Contractually?

Agreements are nonetheless negotiated all the time to provide for the retention or assumption of environmental liabilities in connection with the purchase and sale of contaminated property.

20. Is there anything else about contaminated land that you would bring to the attention of a potential purchaser of that land?

Expanded liability exemptions, maturing risk-based remediation programs and emerging risk management tools, such as environmental insurance, have all been responsible for creating a regulatory and business climate that actively promotes the purchase and sale of environmentally impaired real estate. Creative solutions exist and are regularly employed, with the assistance of technical consultants and legal counsel, to address and manage environmental risks and facilitate these transactions.

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