

Environment & Climate Regulation 2021

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James M Auslander and Brook J Detterman
Beveridge & Diamond

Lexology Getting The Deal Through is delighted to publish the sixth edition of *Environment & Climate Regulation*, which is available in print and online at www.lexology.com/gtdt.

Lexology Getting The Deal Through provides international expert analysis in key areas of law, practice and regulation for corporate counsel, cross-border legal practitioners, and company directors and officers.

Throughout this edition, and following the unique Lexology Getting The Deal Through format, the same key questions are answered by leading practitioners in each of the jurisdictions featured. Our coverage this year includes new chapters on Australia.

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Every effort has been made to cover all matters of concern to readers. However, specific legal advice should always be sought from experienced local advisers.

Lexology Getting The Deal Through gratefully acknowledges the efforts of all the contributors to this volume, who were chosen for their recognised expertise. We also extend special thanks to the contributing editors, James M Auslander and Brook J Detterman of Beveridge & Diamond, for their assistance with this volume.



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Introduction

James M Auslander and Brook J Detterman
Beveridge & Diamond

It is an especially eventful time for environmental law, on an international scale, and we anticipate substantially more activity on the horizon. The global community continues to grapple with widespread issues such as climate change and adaptation, sustainability and supply chains, waste and circular economy considerations, infrastructure development, oceans and species protection, and management of plastics and chemicals such as PFAS. At the same time, individual countries are witnessing changes to their domestic regulatory regimes and significant court decisions. For example, while the United States in recent years has seen an overall shift towards deregulation by agencies, there is significant regulatory activity and litigation in play, which we see continuing regardless of the outcome of the November 2020 US presidential election. Globally, the covid-19 pandemic has only exacerbated existing challenges and uncertainty.

Beveridge & Diamond is pleased to lead the preparation of the *Lexology Getting The Deal Through: Environment & Climate Regulation* chapters at this exciting time. As the largest dedicated environmental law firm in the United States, B&D is a US and global leader on all the issues discussed in these chapters. B&D is also honoured by the opportunity to work with the esteemed contributing firms outside the United States, and appreciates their authored additions to this valuable resource.

We hope you find this publication helpful, and we invite you to reach out to the contributing editors or any of the authors for additional insights.

Australia

William Oxby

Oxby Legal

LEGISLATION

Main environmental regulations

1 | What are the main statutes and regulations relating to the environment?

Australia is a federation of six states with two mainland territories. They are, in no order, New South Wales (NSW), Victoria, Queensland, South Australia, Western Australia, Tasmania, the Australian Capital Territory and the Northern Territory.

The Australian Constitution establishes Australia's federation and divides the power to make laws between the Commonwealth and the states. Each level has a role in environmental regulation. This means that for a single project or development, a proponent may have to seek approvals from all three levels of government: the Commonwealth government department, the state authority and the relevant local government.

The Constitution does not contain an express power permitting the Commonwealth Parliament to make laws with respect to environment protection. Under the division of power, it is the states that have the primary responsibility for making these laws. Under section 109 of the Constitution, if any inconsistency arises between a law of the Commonwealth and a law of a state, the law of the Commonwealth prevails, and the state law is invalid to the extent of the inconsistency.

The Commonwealth's power to make laws with respect to the environment is restricted to matters of national significance. This restriction is reflected in the structure and ambit of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (the EPBC Act), the primary environment protection legislation. The Minister for the Environment has no express power to intervene in decisions of state or local governments, nor is it possible to 'appeal' state or local government decisions to that Minister.

Each of the states and territories has its own environment protection laws, administered by different government departments. With very limited exceptions, the jurisdiction of a state ends at the state border.

Some laws are commonly classed as environment laws and others as planning laws, but the distinction is often arbitrary. In practice, planning laws in Australia also consider impacts on the environment. For this reason, environment and planning typically travel together as legal practice areas.

Many statutes not primarily concerned with environment protection nonetheless contain provisions associated with the issue. This is particularly true of those statutes that facilitate or regulate land use and development. An example of such a statute is each state's mining and petroleum legislation.

Australia can be characterised as a regulated environment where the trend is towards increasing regulation.

The main statutes relating to the environment in Australia are set out in the following table.

Jurisdiction	Principal environment protection legislation
Cth	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
NSW	Protection of the Environment Operations Act 1997 (NSW)
Vic	Environment Protection Act 1970 (Vic) Environment Protection Act 2017 (Vic)
Qld	Environmental Protection Act 1994 (Qld)
SA	Environmental Protection Act 1993 (SA)
WA	Environmental Protection Act 1986 (WA)
Tas	Environmental Management and Pollution Control Act 1994 (Tas)
NT	Environment Protection Act 2019 (NT)
ACT	Environment Protection Act 1997 (ACT)

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

Each state and territory has an integrated system that regulates and controls pollution as a form of environmental impact, often both at a state and at a local government level. In general, pollution is not regulated directly at a Commonwealth level, but is regulated indirectly through national coordination on particular matters. For example, the setting of national guidelines and standards is a matter coordinated nationally, as is the regulation of pollution that affects matters of national environmental significance.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

Each state and territory has a system that regulates and controls soil pollution. These systems often operate at both a state and a local government level.

Laws regulating soil pollution exist in generally two forms: provisions within general environment protection statutes; and statutes specifically regulating soil pollution.

First, the principal environment protection statutes at all levels often include an offence of 'land pollution' or similar.

Secondly, the states and territories can also have specific land contamination statutes. For example, in NSW there is the Contaminated Land Management Act 1997 (NSW). The objective of that statute is to establish a process for investigating and, where appropriate, remediating contaminated land.

In general, soil pollution is not regulated directly at a Commonwealth level but is regulated indirectly through national coordination on particular matters. For example, the setting of national guidelines and standards is a matter coordinated nationally, as is the regulation of pollution that affects matters of national environmental significance.

Regulation of waste

4 | What types of waste are regulated and how?

Each state and territory has a system that regulates waste. These systems often operate at both a state and a local government level. In general, waste is not regulated directly by legislation at a Commonwealth level but is regulated indirectly through national coordination. See, for example, the National Waste Policy.

The regulation of waste is increasingly linked to what is referred to as 'resource recovery', which includes recycling. This means that waste is regulated both under the environment protection statutes and by specific resource recovery legislation. Examples of specific resource recovery legislation include the Waste Avoidance and Resource Recovery Act 2001 (NSW) in NSW and the Waste Reduction and Recycling Act 2011 (Qld) in Queensland.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

All Australian states and territories have environment protection legislation that regulates air pollution. This occurs in the principal environment protection statutes.

The various state statutes require that licences, approvals or permits are obtained for certain prescribed or scheduled activities.

The activities, thresholds and trigger values that are prescribed or scheduled for licensing purposes vary in each jurisdiction. But, in general, the prescribed or scheduled activities include any activity that has the potential to cause air pollution. Examples of such activities are chemical processing and waste treatment.

Greenhouse gas emissions are not regulated, but are subject to a national, incentive-based scheme. The scheme encourages farmers and foresters to carry out projects for carbon storage on their land. Under Commonwealth law, corporations that emit greenhouse gases beyond specified thresholds are required to report their levels of emissions (see National Greenhouse and Energy Reporting Act 2007 (Cth)).

Emissions from motor vehicles are regulated by specific provisions in the environment protection statutes and by particular regulations aimed at motor vehicle emissions (see, eg, Environmental Protection Act 1994 (Qld) Chapter 8 Parts 3E, 3F; Transport Operations (Road Use Management-Vehicle Standards and Safety) Regulation 2010 (Qld) Schedule 1 Part 9).

Each state or territory also sets its own standards for air emissions. Commonly regulated emissions include carbon monoxide, nitrogen dioxide, photochemical oxidants, sulphur dioxide and lead.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

Water is managed both at a national and at a state and territory level. As with environmental laws generally, the majority of regulation occurs at the state and territory level. However, some regulation of water exists at a national level, in recognition of the fact that Australia is the driest inhabited continent in the world, and that water is therefore a scarce and precious national resource.

At a national level, water is regulated through the Department of Agriculture, Water and Environment. This type of regulation means that matters of national environmental significance can be managed through the EPBC Act. In addition, the Water Act 2007 (Cth) (the Water Act) permits the acquisition and management of water by the Australian government for environmental benefit. The Water Act also established the Murray Darling Basin Authority to manage the Murray Darling

Basin, which is the largest river system in Australia and covers parts of Queensland, NSW, Victoria, the Australian Capital Territory and South Australia.

The state and territory environment protection statutes manage water pollution. In addition, the states and territories have specific water management legislation. For example, NSW has the Water Act 1912 (NSW), Queensland has the Water Management Act 2000 (Qld) and Victoria has the Water Act 1989 (Vic).

State legislation manages water in several ways. The legislation typically creates water entitlements based on the availability of water in a catchment. Water entitlements can often be traded. A water entitlement can be separate from the approval to use particular infrastructure to extract or capture the water. For example, you might have an approval to operate a bore, as opposed to an approval to build a dam. In addition, the use to which the water may be put is also regulated. This is to ensure that water, which is a scarce resource, is allocated appropriately. Aside from the capture and use of water, approvals can also be required for inhibiting or altering the natural flow and direction of water.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

Natural spaces and landscapes are protected in a variety of ways at the levels of Commonwealth, state and territory, and local government. No single piece of legislation regulates and protects an entire landscape. Instead, each landscape has layers of regulation that protect both the landscape as whole and its constituent parts.

The most common way of protecting natural landscapes is the declaration of national parks and marine parks. National parks can be declared both at the state and the Commonwealth level, and each level has specific legislation for that purpose (see, eg, National Parks and Wildlife Act 1974 (NSW); Nature Conservation Act 1992 (Qld)). At the Commonwealth level, a marine park, such as the Great Barrier Reef Marine Park, can be protected as a matter of national environmental significance under the EPBC Act.

Particular elements of the landscape can also be protected under state and Commonwealth legislation.

For example, flora, fauna, and indigenous and non-indigenous heritage within the national park can receive particular protection.

The declaration of a natural landscape as a national park also provides indirect protection. For example, only very limited forms of development are permitted in a national park.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

In Australia, both flora and fauna are protected at a state and territory, and Commonwealth level. For example, in NSW, flora and fauna are protected by the Biodiversity Conservation Act 2016 (NSW).

At a Commonwealth level, flora and fauna that are matters of national environmental significance are protected under the Environment Protection and Biodiversity Conservation Act.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

State and territory environmental legislation regulates noise according to its location, nature, volume, duration and time of day. In all state and territories, environment protection legislation provides for the making of policies about noise. For example, in Victoria, state environment

protection policies have been created under the Environment Protection Act 1970 (Vic) to regulate noise pollution. In all states and territories, noise can also be controlled when conditions relating to noise are applied to environmental permits, licences or approvals.

Odours fall within the category of environmental nuisances (see, eg, Environment Protection Act 1994 (Qld) section 15(a)). As such, odours come within the scope of the general provisions that address causing environmental harm. In addition, town planning decisions about the uses of land normally consider odours.

In most jurisdictions, 'noise' includes vibration (see, eg, Environment Protection Act 1994 (Qld) section 12). The only exception is the Australian Capital Territory legislation, which makes no direct reference to vibrations in the context of environment protection. In the Northern Territory, 'noise' is defined as a vibration of a frequency in the range of 0 to 20,000 hertz (see Waste Management and Pollution Control Act 1998 (NT) section 4(1)).

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

Each state and territory has a system that regulates and controls environmental impact. Within that framework there is no specific liability regime for environmental damage. The environment is protected against environment damage through a legislative system that prohibits activities that may damage the environment unless they occur in accordance with the prescribed approval. Where the prescribed approval is not held there are various sanctions including monetary penalties. These operate to both remediate the impact and deter further unlawful activities.

Environmental taxes

11 | Is there any type of environmental tax?

Australia has a federated taxation system. Environmental taxes can be imposed in limited forms at a Commonwealth level and more generally at a state level. Most, if not all, Australian laws that require an approval or permit before an activity can be undertaken will, as a general rule, require an application fee and, potentially, a levy. The fee or levy can be fixed or relative to impact – for example, load-based fees for air pollution or waste disposal. Environmental taxes also exist in the form of energy taxes and transportation taxes. An example of energy taxes is the Commonwealth's excise on crude oil, liquefied petroleum gas, and gas and petroleum products (see Excise Tariff Act 1921 (Cth)). An example of a transportation tax is the stamp duty imposed by states and territories on motor vehicles, which usually comprises a fixed-fee component and a component that increases with vehicle size (see, eg, Duties Act 2000 (Vic) section 214).

In 2011, Australia introduced a carbon-pricing mechanism, which has since been repealed. The Clean Energy Act 2011 (Cth) (no longer in force) was intended to control carbon dioxide emissions through a carbon-pricing mechanism. The Act was eventually repealed and ceased to have effect from 1 July 2014.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

Each state and territory has a system that regulates hazardous activities either directly or indirectly. The regulation extends to the activity as well as its component parts. This can occur at both a state and national level. For example, mining is a heavily regulated activity and both state and national approvals are typically required, including for the relevant

mining lease, which permits the activity as whole. Approvals may also be required for various activities within the mine, such as the transport of process chemicals, storage of hazardous materials, power generation and blasting.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

Dangerous goods (explosive, flammable, toxic, infectious, corrosive properties) are predominantly regulated at a State or territory level to national standards that are in part or in whole adopted by the relevant State or Territory. For example, the Australian Code for the Transport of Dangerous Goods by Road and Rail.

At a Commonwealth level, a permit is required for the export, import or transit of hazardous waste as defined in the Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Cth) (the Hazardous Waste Act). The definition of hazardous waste encompasses industrial waste that is explosive, flammable, poisonous, corrosive or toxic, among other things. It also includes household waste and residues arising from the incineration of household waste. The Hazardous Waste Act gives effect to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

The Department of Agriculture, Water and the Environment is responsible for issuing permits for hazardous waste, and the type of permit required will depend on the country of destination (for exports) or the country of origin (for imports).

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

Safety is managed at both a Commonwealth and state level. Each of the states has comprehensive occupational health and safety (OH&S) laws that are separate and distinct from environment protection laws. These OH&S laws can apply equally to an industrial accident where both safety and environmental impact are of concern. Safe Work Australia is a statutory body jointly funded by the Commonwealth and states that develops national policy for OH&S and workers' compensation.

Prevention of industrial accidents more generally is achieved through Australia's rigorous regulatory requirements for approving industrial activities. Approval for industrial activities extends to the design and impact of the activity with regulators mandating minimum design requirements and standards that must be achieved to be considered for approval. For example, major projects that have obtained environmental approvals will be subject to extensive conditions mandating further design and engineering approval as well as construction and operational management plans that relate to matters that include noise, dust, blasting, sediment control, water management, design standards and safety. Non-compliance with conditions of approvals is, in most cases, an offence as well as enabling the regulatory ability to issue stop-work and restitution-type orders.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

In the context of Australian M&A transactions, environmental aspects are managed together with planning matters. They are referred to collectively as environment and planning (E&P).

There are broadly four E&P issues to be considered in an M&A transaction.

- Are the requisite E&P approvals in place? Where the asset is in operation, this question becomes, 'Are the approvals in place that permit the operation of the asset?' Where the asset is yet to be constructed, the question becomes, 'Are the approvals necessary to commence construction in place?' Where approvals are not held, the activity may be unlawful and subject to penalties, including stop-work orders and remediation. These considerations are relevant in the context of both share acquisitions and assets sales.
- Is there compliance with conditions in any approvals held? If conditions are not being complied with, the activity may be unlawful and subject to penalties, including stop-work orders and remediation. A history of non-compliance can impact the ability to procure future approvals. The issue of compliance with conditions can be more critical for share sales as opposed to asset sales where the corporate history is not acquired.
- Social licence: in making decisions about licences to operate, decision makers are increasingly considering the company or asset's past E&P performance. This factor is important for both share sales and asset sales, because assets often inherit the social licence of the former owner.
- Regulatory requirements: the relevant E&P approvals might not be automatically transferable. Generally, planning approvals run with the land, but environmental approvals often do not. The transfer of certain approvals might require consent from a regulatory authority. In certain cases, a fresh approval might need to be acquired.

Each issue can be managed in a transaction through the pricing, structure and documents that underpin the transaction.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

Other transactions, such as financing and initial public offerings, are not unlike M&A transactions in Australia. While the same questions arise, the emphasis can be slightly different. For example, a financing transaction might require security over the assets and, accordingly, the nature of the regulatory investigation will focus on what security may be possible.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

The public procurement process has many elements. One element is the question of whether the procuring entity is a government or a state-owned corporation, or indeed whether the government has an interest in the relevant asset or business. The extent of government ownership can of itself affect the nature of the procurement process.

As a general rule, all public procurement carries with it a merits element that may either expressly or implicitly import a company's history of compliance and performance. In addition, environmental compliance can be swept up in broader procurement commitments (eg, to comply with the law).

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

In most states, it is either the relevant minister, department or regulatory authority or the operative statute that determines whether an environmental impact assessment (EIA) is required for a particular project. The kinds of activities that require EIAs differ between the various states and territories but, as a general rule, the higher the potential for impact to the environment, the greater the level of assessment that will be required.

Under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (the EPBC Act), projects require approval if they have the potential to have a significant impact on a matter of 'national environmental significance' (such as world heritage properties and migratory species).

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

EIAs are one mechanism that regulators use to identify and evaluate the potential environmental impacts of proposed activities. The EIA process varies between the states and territories.

The process for securing an approval under the Commonwealth EPBC Act, requires the proponent to refer their project to the Department of Agriculture, Water and the Environment (DAWE) for assessment. The EPBC Act provides for five different levels of assessment. Which level of assessment a project will be subjected to depends on the significance of the project and how much information is already available.

The process of environmental assessment also varies between the various states and territories. However, the process of applying for an environmental approval generally has four stages: application, information, notification and decision. In the application stage, the proponent lodges an application and the regulator determines if the application has enough information to meet the requirements of the relevant statute. In the information stage, the regulator assesses the information contained in the application and may request further information from the proponent. In the notification stage, the regulator makes the application documents publicly available and people have an opportunity to make submissions or, potentially, object. At the final stage of the process, the regulator or decision maker decides either to approve the application with conditions or to refuse it.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

Environmental regulatory authorities exist at both the Commonwealth level and the state and territory level. The Commonwealth Department of Agriculture Water and the Environment (DAWE) is responsible for conducting assessments and granting permits and licences under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (the EPBC Act). The scope of the DAWE is limited to Commonwealth legislation.

Most states and territories have an independent environment protection regulator. For example, South Australia's Environment Protection Authority (EPA) is responsible for administering the Environment Protection Act 1993 (SA). In Queensland, the Department of Environment and Science is the environmental regulator with

responsibility for administering the Environmental Protection Act 1994 (Qld). In New South Wales (NSW), the EPA is an independent authority and was established under the Protection of the Environment Administration Act 1991 (NSW).

Investigation

21 | What are the typical steps in an investigation?

Australian environment protection legislation confers broad investigatory powers on regulators. Regulators have the power to enter and remain on property, to remove property for further investigation, to compel the production of documents and information and to interview persons.

Some states have dedicated bodies that are established to investigate and prosecute environment-based offences. For example, in NSW, the EPA is an independent authority that has these functions.

The nature of the investigatory steps depends on the nature of the non-compliance, but a formal investigation typically precedes prosecution for an environment-based offence.

Prosecutions and fines do not automatically follow the breach of an environmental law. In most cases in Australia, prosecutors have discretion in relation to fining or prosecuting someone for the breach of environmental legislation.

Administrative decisions

22 | What is the procedure for making administrative decisions?

In most states and territories, two different procedures exist for making administrative decisions, one that requires the making of an application and another that does not.

First, for some administrative decisions, an application by a third party is not required. In this case, the administrative power is enlivened through the satisfaction of certain statutory preconditions. For example, a decision maker or regulator may have the power to amend the conditions of an approval unilaterally where the holder of the approval is in breach of the terms and conditions of approval.

Secondly, some administrative decisions require that an application be made before the power to make the decision is enlivened. In these cases, the decision maker is not itself allowed to make the application.

The procedure for the application and for the decision itself can, accordingly, vary considerably depending on the state and the nature of the application and decision. Where an application is required to be made, the relevant environmental legislation may prescribe its form, the information it must include and any assessment that must accompany it. In addition, many application processes require a public notification and consultation process.

Unless a court's jurisdiction has been effectively ousted by the statute under which the administrative decision has been made, the administrative decision can typically be reviewed under common law principles (eg, a writ of mandamus) or under the relevant state or federal administrative review statute (see, eg, Judicial Review Act 1991 (Qld); Commonwealth Administrative Decisions (Judicial Review) Act 1977 (Cth)).

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

A broad range of compliance mechanisms are available to state and territory regulators. For example, the Queensland Department of Environment and Science has recourse to warning letters, infringement notices, civil proceedings for court orders, enforceable undertakings and prosecutions for serious contraventions.

At the Commonwealth level, the EPBC Act includes three main compliance mechanisms: civil or criminal penalties (eg, for providing false or misleading information to obtain approvals); remediation orders and determinations; and enforceable undertakings.

In all Australian jurisdictions, there are substantial monetary penalties and the potential for imprisonment for environment-based offences. In the case of companies, directors and persons involved in the management of the company can also be liable for actions of the company and, therefore, face fines or prosecution.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

There are two forms of review available in Australia for decisions of regulators.

Under certain environmental law statutes and planning laws, an affected person can request a 'merits review' of an administrative decision. A merits review is where the person conducting the review (often a member of a tribunal) effectively stands in the shoes of the original decision maker. The reviewer may ask for and hear additional information. In these cases, the decision of the tribunal member will replace the original decision. There is no general right for merits review at common law, and so a right to seek merits review must be specifically provided for by statute. In most cases, merits reviews are subject to strict deadlines before which the appeal must be made.

The common law and judicial review statutes also allow for the formal review of the lawfulness of decisions. An application for judicial review can be made under traditional grounds of review, such as ultra vires and failure to afford procedural fairness. Where this type of appeal is lodged, the body charged with the review (typically a court) does not stand in the shoes of the original decision maker and instead reviews only the lawfulness of the decision. In that regard, the relief typically sought is that the impugned decision was invalid and is set aside.

Where there is a formal judicial review statute, it typically codifies and expands on the traditional common law grounds of review (see, eg, Administrative Decisions (Judicial Review) Act 1977 (Cth); Judicial Review Act 1991 (Qld)).

Care should be taken to meet deadlines, because the ability to seek judicial review is often time-limited.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Environmental law proceedings can be both civil and criminal. In most jurisdictions, specialist courts and tribunals have been established under enabling statutes to hear both civil and criminal matters.

Criminal matters in environmental law are typically associated with breaches of the law and prosecutions. Civil matters are associated with judicial review and merits appeals.

Examples of the specialist courts and tribunals include:

- Queensland: Land Court and the Planning and Environment Court;
- New South Wales (NSW): NSW Land and Environment Court; and
- Victoria: Victorian Civil and Administrative Tribunal.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

In Australia, the breach of an environmental law is usually a criminal offence. For example, it is generally an offence to carry out certain activities or developments without the requisite approval. In addition, it can also be an offence to carry out an approved activity otherwise than in accordance with the approval itself. It is also typically an offence to breach a condition of approval or a requirement of a statute that applies to an activity.

The power of a court to hear proceedings for the infringements of environmental laws is largely conferred by the statute containing the relevant environmental law that has been breached.

In some cases, the states and territories have established specialist courts and tribunals to hear both civil and criminal matters outside of the main criminal courts.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Infringements of environmental laws in Australia are typically criminal matters (ie, subject to criminal prosecution rather than civil proceedings).

Civil claims, such as contractual claims, may arise from infringements of environmental laws. The breach of the statute is unlikely to provide a civil cause of action in itself. The availability of a cause of action will depend on the relationship between the parties and the loss suffered. For example, a contractual claim may only be available where there is a contractual relationship between the parties and a causal connection between breach and loss. It is not unusual for contracts to contain warranties requiring compliance with environmental laws. A breach of an environmental law may also result in damage to a third party and a claim may lie in nuisance.

Defences and indemnities

28 | What defences or indemnities are available?

Australian environmental laws contain offences of strict liability as well as offences that have a knowledge element. As a general rule, strict liability offences are lesser in nature and involve a lesser degree of environmental harm. In contrast, the most serious environment offences are those where the offender has knowingly committed the offence.

The common law of Australia also recognises principles of vicarious liability and proportionate liability for criminal proceedings.

Each of the states has different environmental laws, which means the offences and available defences are also different. The existence and applicability of statutes of limitation also vary by jurisdiction.

The more common defences require the respondent to demonstrate that they took due care, reasonable steps or reasonable precautions to prevent the conduct of the impugned behaviour.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

The relevant state and territory environmental statutes contain specific defences. Defences typically require the director or executive officer to demonstrate one of the following.

First, it must be shown that the director or officer was not in a position to influence the conduct of the corporation in relation to the contravention of the relevant provision.

Alternatively, where the director or officer is in a position to influence the conduct of the corporation, it must be shown that they used all due care to prevent the corporation's contravention. This can also be expressed such that the director or officer must show that they took all reasonable steps to ensure the corporation complied with the relevant provision.

Appeal process

30 | What is the appeal process from trials?

Australia is a common law jurisdiction and has a hierarchy of appellate courts.

In both civil and criminal matters there are typically three levels of appeals. There can be more in environmental law, where the review of a decision can be undertaken by the administrative body making the decision. Likewise, a specialist court such as the NSW Land and Environment Court may allow an appeal from a commissioner to a judge. Equally too, the nature of the decision, the relief sought, and the cause of action will largely dictate the availability of an appeal and, if an appeal is available, the grounds on which it may be made.

An appeal from a trial judge is typically made to a superior court constituted by a single judge. In most cases, the superior court is the Supreme Court of the relevant state, or the Federal Court for Commonwealth statutes. An appeal from the decision of a superior court can be made to the corresponding appeal court (eg, the Full Court of the Federal Court or the NSW Court of Appeal), which can be constituted by three or more judges.

A final appeal may be made to the High Court of Australia. In most cases, an appeal to the High Court requires the grant of 'special leave' by the High Court. There are no further appeals from the High Court.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Australia is a party to multiple international environmental treaties. The Department of Foreign Affairs and Trade maintains the Australian Treaties Database, a database of international treaties to which Australia is a party. The database lists 70 current treaties to which Australia is a party where 'Environment' is listed as a subject.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

Although international treaties are not generally enforceable under Australian domestic law, they do have a substantial influence on the content and evolution of Australian environmental law.

The best example is the Environment Protection and Biodiversity Conservation Act 1999 (Cth). This Act provides a framework to implement a number of conventions and international agreements – for example, the Ramsar Convention, the World Heritage Convention, the Bonn Convention, the Japan–Australia Migratory Bird Agreement and the China–Australia Migratory Bird Agreement.

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

There are three predominant emerging trends in environmental law in Australia.

The first trend is our response to climate change. Australia does not have a carbon-pricing mechanism or carbon tax that directly operates to manage the reduction of emissions. Climate change and regulatory reform is a constantly evolving area of Australian environmental law. Touch points include water management (because water is a scarce resource in an arid country like Australia) and the regulation of large emitters of greenhouse gases.

The second trend is in land use. Australia has a large resources sector and a large agricultural sector, both of which are critical to the Australian economy. Environmental laws (in part) manage the interaction between the two sectors. There is continuing evolution of Australian environmental laws to manage the interactions between competing land uses and to protect the receiving environment.

The third trend is in the area of Commonwealth regulation. The second 10-year review of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) is in progress and is due to be completed in late 2020. The review's Interim Report, released in July 2020, recommends large-scale reform to the Act, which is the principal Commonwealth environmental law. The recommendations are consistent with greater regulation at the Commonwealth level. Whether and to what extent the ultimate recommendations are adopted by Parliament will be a theme for the remainder of 2020 and likely 2021.

Coronavirus

34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

In Australia, the nature and level of response to the covid-19 pandemic has varied between the states and territories, as well as between levels of government within each state and territory. Consequently, there is no single source of information or uniformity between jurisdictions. Good practice is to determine what the 'normal' process would be and then test whether that process has in anyway been modified or changed as a consequence of the pandemic. As a general rule, the regulatory response to the pandemic has taken three forms:

- time frames in statutes have been extended in some cases, or there has been an ability to seek an extension or defer compliance for a period of time;
- there has been economic support in the form of fee relief, deferrals of expenditure requirements and support packages. Each package of economic support varies depending on the state and industry; and
- there has been a focus on economic recovery and, consequently, there is support for certain projects, including projects being fast-tracked to ensure earlier commencement.

As the response to the pandemic evolves, so too does the level and nature of support. The most up-to-date information can be accessed on the key government websites. The relevant departments are listed below.

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Government		Departments and divisions
Cth	Commonwealth	<ul style="list-style-type: none"> • Department of Agriculture, Water and the Environment • Advice for EPBC Act Approval Holders, Department of Agriculture, Water and the Environment • Department of Industry, Science, Energy and Resources
NSW	New South Wales	<ul style="list-style-type: none"> • Department of Planning, Industry and Environment • Environment Protection Authority • Mining, Exploration and Geoscience, Department of Industry
Vic	Victoria	<ul style="list-style-type: none"> • Department of Environment, Land, Water and Planning • Environment Protection Authority • Earth Resources, Department of Jobs, Precincts and Regions
Qld	Queensland	<ul style="list-style-type: none"> • Mining and resources, Department of Natural Resources, Mines and Energy • Department of State Development, Tourism and Innovation • Department of Environment and Science
SA	South Australia	<ul style="list-style-type: none"> • Department for Energy and Mining • SA Planning Portal, Department of Planning, Transport and Infrastructure • Department for Environment and Water • Environment Protection Authority
WA	Western Australia	<ul style="list-style-type: none"> • Department of Mines, Industry Regulation and Safety • Department of Agriculture, Water and the Environment • Department of Planning, Lands and Heritage
Tas	Tasmania	<ul style="list-style-type: none"> • Department of Primary Industries, Parks, Water and Environment • Department of State Growth
NT	Northern Territory	<ul style="list-style-type: none"> • Changes to Planning Rules, Northern Territory Government • Environment Protection Authority
ACT	Australian Capital Territory	N/A

Belgium

Bernard Deltour, Valérie Vandegaart, Zoé Thiéry and Claire Thollembeck

Industrious Law

LEGISLATION

Main environmental regulations

1 | What are the main statutes and regulations relating to the environment?

The Belgian Constitution has enshrined the right to lead a life in keeping with human dignity, which, inter alia, includes the right to protection of a sound environment (article 23). The latter entails the standstill principle.

The Constitution organises Belgium on a federal basis, sharing competencies between the federal state and - notably - three regions: the Flemish, Walloon and Brussels Metropolitan regions.

These regions are competent for most aspects of environmental protection, inter alia, soil, water and air protection, waste, environmental permitting, nature conservation and planning and zoning.

The federal state remains competent for product standards and for protection against ionising radiations.

The main environmental, waste and soil legislative acts are as follows:

- In the Walloon region:
 - the Walloon Environmental Code of 27 May 2004;
 - the Walloon regional statute (WRS) on the environmental permit of 11 March 1999;
 - the WRS on waste of 27 June 1996; and
 - the WRS on the management and remediation of soils of 1 March 2018.
- In the Brussels Metropolitan region:
 - the Brussels Code on the Management of Air, Climate and Energy of 2 May 2013;
 - the Brussels regional statute (BRS) on the environmental permit of 5 June 1997;
 - the BRS on waste of 14 June 2012; and
 - the BRS on the management and remediation of soils of 5 March 2009.
- In the Flemish region:
 - the Flemish regional statute (FRS) of 5 April 1995 containing general provisions on environmental policy;
 - the Soil Sanitation and Protection Decree of 27 October 2006;
 - the FRS on the sustainable management of materials' cycles and waste Decree of 23 December 2011; and
 - the FRS on the environmental permit of 25 April 2014.

Infringing these regional statutes is sanctioned through a variety of administrative and criminal sanctions, the latter being imposed through prosecution in front of the courts organised by the federal authority.

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

Integrated environmental registration and permitting schemes have been organised by each region. These schemes transpose the EU's Industrial Emissions Directive, addressing the environmental global performance of the listed facilities and activities, inter alia, their emissions to air, water and land, waste management, energy efficiency, noise, prevention of accidents and restoration of the site upon closure.

Listed facilities and activities with the lowest impact merely require a notification with the competent authority, whereas the others require an environmental permit. The competent authorities vary from region to region.

All three regions have now implemented a global permitting scheme, integrating the planning permission for the 'mixed' projects.

Unlike for other listed facilities, the authorisations for nuclear installations are awarded on the basis of federal legislation.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

Each region has now set up an administrative body managing a database containing the available information about the environmental quality of the soil of the various pieces of land, as mentioned in the official land registries.

Prior to concluding real estate transactions (the exact types of transactions varying from region to region), a (recent) soil certificate regarding the land has to be provided by the transferor to the transferee. Such certificates consist in excerpts of the soil inventory.

Regional legislation specifies the cases where soil investigations are mandatory, often prior to obtaining a soil certificate. In-depth soil investigations, soil remediation programmes, follow-up and security measures may then be required by the competent regional authority, depending on the level and type of the identified soil pollution.

Each region determines the types of pollution for which such measures are required. In the Flemish and Walloon regions, the applicable regimes mainly distinguish between 'historic' pollution (ie, caused prior to a certain date (29 October 1995 and 30 April 2007, respectively) and 'new' pollution. Historic pollutions are subject to a risk management based approach (only requiring remediation when causing a 'serious threat'), whereas new pollutions require a remediation as soon as the pollutant exceeds the regulatory thresholds.

The Brussels Metropolitan region has a slightly more complicated (and indeed less 'legible') system, distinguishing between 'unique', 'mixed' and 'orphan' pollutions.

In principle, the soil management obligations are allocated to one of the following persons, according to the indicated order of priority:

- Walloon region: (1) the person having (allegedly) caused the pollution, (2) the current operator of the listed facility or activity located on the land, or (3) its owner or the holder of another right in rem on said land.
- Flemish region: (1) the current operator of the listed facility or activity located on the land, (2) the user of the land, or (3) its owner.
- Brussels Metropolitan region:
 - in the case of a unique pollution (1) the holder of the environmental permit for the listed facility or activity located on the land, (2) the owner of a right in rem, or (3) the person having (allegedly) caused the pollution;
 - in the case of a mixed pollution: joint and several responsibility; and
 - in the case of an orphan pollution: the holder of any right in rem on the land.

Having executed its soil management obligations imposed by the competent regional authority, the person in question is allowed to try to recover the incurred costs with any third party potentially liable on the basis of common civil grounds (contractual or extracontractual (eg, tort) basis).

Regulation of waste

4 | What types of waste are regulated and how?

Belgium being an EU member state, its three regions define 'waste' in accordance with the Waste Framework Directive 2008/98 of 19 November 2008 (WFD): 'any substance or object which the holder discards or intends or is required to discard'.

EU case law has given a broad interpretation of this definition in accordance with the WFD and the EU objective for high level environmental protection.

Waste is mainly divided into various categories: household waste originating from household activities; industrial waste from industrial, commercial, scientific or craft activities; hazardous waste, displaying one or more of hazardous properties described in the WFD's Annex III (eg, explosive, highly flammable); and inert waste.

The WFD sets out a framework for the definition of 'by-products' and 'end-of-waste status'.

The three regions have transposed these definitions in their regional legislation. However, they have each set their own procedures to qualify 'by-products' and 'end-of-waste'.

In the Brussels region, the 'end-of-waste status' must be requested in the application for an environmental permit.

In the Walloon region, the 'end-of-waste status' and 'by-products' procedures are based on an authorisation regime. By way of derogation, a registration procedure applies for the substances or waste with the same characteristics as those having previously obtained an 'end-of-waste' or 'by-products' status.

In the Flemish region, a registration procedure applies for substances and materials that directly fulfil the criteria established at EU level or the criteria of raw materials that the operator wishes to put into the market. For certain materials, a raw material declaration can be requested from the competent regional authority.

In all three regions, environmental permits or notifications are required for waste storage and (pre-)treatment (by recovery or disposal).

In accordance with the EU legislation, obligations also apply to other types of waste management operations: registration or licensing imposed on collectors, transporters, brokers and dealers; keeping of waste productions registers; notifications of transboundary shipments; etc.

Specific regional regulations apply to a number of waste streams that are subject to take back-obligations, either in order to implement EU legislation on waste electrical and electronic equipment (WEEE), end

of life vehicles (ELVs), batteries and packaging, or on a specific internal basis (eg, for spent oils, tyres or solar panels).

In general, the extended producer responsibilities that these various regional provisions impose are dealt with through collective take-back schemes, organised by the concerned industry sectors on a non-profit basis (eg, RECUPEL with respect to WEEE, BEBAT for batteries, FEBELAUTO for ELVs).

Noteworthy is the – quite uncommon – interregional cooperation agreement between the three Belgian regions, regarding the prevention and management of packaging waste (dated 4 November 2008). This interregional piece of legislation forms the basis for an integrated regulation of packaging waste across the whole of Belgium. It has resulted in two collective take-back schemes, organised by the concerned industries: FOST PLUS for household packaging waste and VAL-I-PAC for industrial packaging.

Obviously, waste management legislation is a key tool in the development of policies aiming at promoting a circular economy. Between 2016 and 2018, the three regions have announced a score of measures in this respect in their most recent waste prevention and management plans, while the federal government's Ministers for Economy, Public Health and the Environment developed a road map for a transition towards a circular economy in 2016.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

In all of Belgium's three regions, air emissions, noise, odours and vibrations from industrial activities are mainly regulated under their respective integrated environmental permitting schemes.

Other regional regulations have set threshold levels regarding environmental noise and air quality.

The strict(er) conditions regarding these emission limits have recently given rise to a series of court cases, regarding, inter alia, low emission zones in cities (eg, Ghent and Antwerp) or for the whole of the Brussels Metropolitan region's territory, aircraft noise, specific conditions in environmental permits and Best Available Techniques and even the country's policies with respect to climate change.

Energy efficiency of buildings is mainly addressed through the regional regulations on planning and zoning, although obligations to carry out energy efficiency audits are imposed through the aforementioned regional environmental permitting regimes.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

Certain aspects of seawater protection have remained within the jurisdiction of the federal state. These are regulated under the federal law of 20 January 1999 on seawater protection in sea areas under the jurisdiction of Belgium.

At regional level, the main regulations with respect to the protection of water are as follows:

- in the Walloon region: the Walloon Water Code (Book II of the Environmental Code);
- in the Brussels Metropolitan region: the regional statute of 20 October 2006 establishing a framework for water policy; and
- in the Flemish region: the regional statute of 18 July 2003 concerning the integrated water policy, coordinated by 15 June 2018.

On the basis of this framework legislation, the three regional authorities are developing integrated water management policies, in accordance with the applicable EU legislation

This, inter alia, comprises regulating discharges into surface waters as well as groundwater extraction, based on their respective environmental permitting schemes.

In the three regions, drinking water supply is operated by publicly owned companies (eg, the Société Wallonne de Distribution d'Eau in the Walloon region, Vivaqua in the Brussels Metropolitan region and De Watergroep in the Flemish region).

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

As of the institutional reforms of 1980, the regions have based their nature conservation policies on the pre-existing federal nature conservation law of 2 July 1973.

Subsequently, the regions modified this law or adopted specific legislation (eg, the Flemish regional statute of 21 October 1997 on nature conservation).

Regarding the protection of natural spaces, certain areas qualified as sites of Community importance by the European Commission (based on a list submitted by the regions) have been designated as special areas of conservation under the EU-wide Natura 2000 network.

Any plan, programme or project under an environmental permitting regime that is likely to have a significant impact on a Natura 2000 site is subject to an appropriate impact assessment.

For nature conservation reasons, the regional authorities are empowered to carry out mandatory acquisitions of real estate in the public interest. For the same reasons, the Flemish and Brussels Metropolitan regional authorities are allowed to swap ownership rights, leases or land use rights.

Protection of natural spaces and landscapes is also organised through the regional legislation on planning and zoning, which limits the rights to use and develop land accordingly.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

Specific prohibitions and a monitoring system are provided for strictly protected species. For instance, regional governments are competent to adopt restricting measures on capturing and exploitation of such species.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

Noise, odours and vibrations from industrial activities are mainly regulated under the respective integrated environmental permitting schemes of Belgium's three regions.

Other regional regulations have set threshold levels regarding environmental noise.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

EU Directive 2004/35 on environmental liability with regard to the prevention and remedying of environmental damage has been transposed by the federal state with respect to its remaining environmental powers (eg, the Royal Decree of 3 August 2007 on the prevention and remedying of environmental damage during the placing on the market of products consisting of or containing genetically modified organisms)

as well as by the three regions, through the adoption of the following acts of their respective parliaments:

- the Walloon Environmental Code (Part VII);
- the Code of 25 March 1999 on Inspection, Prevention, Observation and Suppression of Environmental Law Infringements in the Brussels Metropolitan Region; and
- Title XV of the FRS of 5 April 1995 containing general provisions on environmental policy in the Flemish region.

The notion of 'environmental damage' covers adverse effects to protected species and natural habitats, as well as to water and soil. The 'damage' must constitute a measurable adverse change in a natural resource or a measurable impairment of a natural resource service that may occur directly or indirectly.

The regional legislation is based on two types of environmental liability regimes:

- a no-fault liability regime, which applies when environmental damage is caused by an activity under environmental permits (enumerated in the respective applicable regional legislation) or when any imminent threat of such damage occurs by reason of any of those activities (which concern, inter alia, the energy, chemical and waste industries); and
- a fault-based liability regime, which requires the demonstration of a fault or a negligence from the operator, damage or any imminent threat of such damage to protected species and natural habitats caused by any other activity (not covered by the no-fault liability regime) and a causal link between them.

Environmental taxes

11 | Is there any type of environmental tax?

According to article 170 of the Belgian Constitution, taxes may be imposed at each level of power (among others, by the federal state, the regions, the provinces and the municipalities).

The main applicable examples of 'environmental taxes' at present are the regional levies on certain types of waste treatment, on discharges of wastewater, on the catchment of surface waters and on the welling of groundwater.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

Apart from stricter environmental permitting rules, some types of activities are also subject to specific licensing regimes; for example, in the case of waste management (collection, transport, brokering, etc).

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

The federal law of 21 December 1998 on product standards for the promotion of sustainable production and consumption, the protection of the environment, health and workers entitles the federal authorities to regulate the putting on the market of hazardous products and substances.

Especially with respect to highly debated products such as phytopharmaceuticals, biocides, single-use plastics and fireworks, the delineation between the federal state's authority with respect to the putting on the market of certain products, on the one hand, and the regional authority with respect to environmental protection on the other hand, gives rise to a number of conflicting initiatives.

This issue has recently led to rulings from the Constitutional Court stating that the principle of federal loyalty is harmed when a region declares a region-wide ban on the use of a product.

In view of stimulating the development of a circular economy, such issues should call for more concertation between the federal state and the three regions.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

Belgium has transposed Directive 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances through a cooperation agreement of 16 February 2016 between the federal state, competent for civil security and the three regions, competent for the protection of the environment.

The prevention of major accidents is mainly implemented through emergency planning, public information, data and information sharing about industries, environmental permitting and planning and zoning (eg, with restrictions on rights to develop surrounding areas).

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

Environmental aspects remain an important issue in M&A transactions.

In general, 'share deals' make the acquisition process easier, as such transactions do not trigger administrative burdens (eg, transferring environmental permits, soil management obligations) per se. Indeed, such transactions merely entail a change in the ownership of the shares in the capital of the legal entity, while the latter as such remains unchanged.

However, the main disadvantage for such transaction consists in the fact that the economic risks associated with any pre-existing liability – whether civil or criminal – is transferred to the new shareholders. Especially in times of higher litigation risks.

Although asset transactions allow the new owners to be more efficiently fenced off from liabilities (personally) burdening the previous owners, the downside to such deals is that they involve a lot more practical implications.

But, in any case, a thorough and careful due diligence exercise remains highly advisable. Moreover, an efficient assessment of the value of a company on environmental grounds shall not be limited to its industrial hardware, but also focus on its products and services.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

Any transaction should duly address the potential impact of environmental legislation on the goods, products, assets or persons involved.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

Regulating public procurement is a federal competence. The legislation has been fundamentally reviewed through the federal law of 17 June 2016 concerning public procurement and its implementing royal decrees of 18 April and 18 June 2017.

Article 7 of the federal law of 17 of June 2016 provides that economic operators delivering publicly procured works, goods or services must ensure full compliance with environmental law, throughout the value chain. Violations of this obligation (including previous violations) can lead to the economic operator being excluded from the procurement process (article 69 of the law of 17 of June 2016).

More specific environmental protection aspects can be taken into consideration at every single stage of the public procurement procedure.

Procurement specifications may provide for clauses aiming at preserving the environment and reducing environmental footprints (eg, limiting waste production, energy consumption or carbon emissions, the insulation of buildings).

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

Two EU directives apply in the field of environmental assessments:

- Directive 2001/42 on the assessment of the effects of certain plans and programmes on the environment (the IEA Directive); and
- Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

Both directives have been transposed by the federal state and the regions in Belgium, each concerning their own competencies.

Environmental impact assessments (report or study) are to be carried out prior to the adoption of a federal, regional or local plan or programme (eg, the development plan of the electricity transmission network; urban planning and zoning; regional waste management plans).

The European Court of Justice has given an extremely broad interpretation of the concept of 'plans and programmes': its 27 October 2017 judgment (No. 290/15, *d'Oultremont*) rules that the Walloon sectoral operating conditions for windmills constitutes a 'plan' requiring a prior environmental impact assessment. Hence, legislative or regulatory provisions that can have a significant environmental impact require a prior environmental impact assessment. Needless to say, this ruling has caused major turmoil, as it could invalidate any such provision enacted or adopted without such impact assessment having been carried out.

At the regional level, any environmental or planning permit application must include either an environmental impact assessment notice (EIN) or an environmental impact assessment study (EIS). Projects with a substantial potential impact are automatically subject to an EIS (eg, large combustion plants), whereas for other projects, the permit-issuing authority may decide to impose an EIS on a case-by-case basis, in view of significant environmental effects.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

The main steps of environmental assessment processes are the following.

- In the case of an EIN or report:
 - the assessment is integrated to the application file relating to the project, plan or programme;
 - a public inquiry on the application is organised;
 - the concerned public entities and agencies are consulted to deliver their advice; and
 - the decision made demonstrates that the notice or report and the information gathered in the consultation process was duly considered and taken into account.

- In the case of an EIS:
 - a preliminary information meeting may or must be organised to explain the content of the EIS, before submitting a permit application or a draft plan or programme, in order to gather suggestions on the scope and content of the EIS;
 - the EIS is carried out by a licensed expert, prior or after submitting the application or the draft;
 - a public inquiry is organised with respect to the project or the draft and concerned public entities and agencies are consulted to deliver their advice; and
 - the decision made demonstrates that the EIS and the information gathered in the consultation process were duly considered and taken into account.

REGULATORY AUTHORITIES

Regulatory authorities

- 20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

At federal state level, the most important administrations are the Federal Public Services for Public Health, Safety of the Food Chain and Environment and the Directorate-General for Health and Prevention of the Federal Public Service of the Interior/for Home Affairs.

In the Flemish region, the main administrative bodies are the Department of the Environment of the Flemish administration and the OVAM, the Flemish agency for waste, materials and soils.

The Brussels Metropolitan region has an integrated environmental agency: Environment Brussels.

In the Walloon region, the main administration is the General Direction Agriculture, Natural Resources and Environment of the Walloon Public Service.

Local (municipal colleges of mayor and aldermen and – mainly in the Flemish region – provincial governments) or regional (specific agencies or the government or a single minister) are entrusted with delivering environmental permits, licences or authorisations. In general, this also entails the power to modify, suspend or revoke these decisions (eg, permits) or their specific conditions.

Investigation

- 21 | What are the typical steps in an investigation?

Both judicial authorities (typically the public prosecutors' offices and the federal and municipal police), as well as the federal and regional environmental inspectorates are entrusted with investigative powers. The latter have limited powers, exclusively deriving from the specifically applicable environmental regulations, whereas the judicial authorities are competent for all infringements of any criminally sanctioned legislation.

In principle, any official report of a criminally sanctioned infringement has to be communicated to the territorially competent prosecutor's office. The prosecutor has the option of whether or not to open a further investigation (through a criminal information or a judicial instruction – the latter automatically opening a pretrial phase, either resulting in formal prosecution or a judicial decision to dismiss the case) or to even directly initiate criminal proceedings.

In most situations where the prosecutor decides not to take criminal proceedings for the alleged infringement, the case is followed by an administrative sanctioning procedure, aiming at seeing administrative sanctions (generally speaking a fine) being imposed.

Administrative decisions

- 22 | What is the procedure for making administrative decisions?

Administrative decisions potentially impacting the environment (eg, regarding environmental permits or soil remediation programmes) are organised by the various applicable pieces of legislation.

In many cases, the applications for such decisions trigger public inquiries, entailing interested third parties to submit (written or oral, or both) objections to the project. Similar principles apply when specific administrative measures relating to listed activities or installations are considered, then also entailing the right for the concerned operator to be heard in the process.

Competent authorities must abide by the general principles of Belgian administrative law including the principle of good administration and the principle of proportionality.

Sanctions and remedies

- 23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

Environmental infringements are classified according to their level of seriousness. This classification determines the level of the sanction and the applicable procedure.

Administrative authorities are also entitled to order measures, for instance ordering the immediate cessation of an activity or imposing a remediation plan.

Appeal of regulators' decisions

- 24 | To what extent may decisions of the regulators be appealed, and to whom?

Whenever this is provided for by the applicable legislation, decisions taken by regulatory authorities can be challenged with a (higher) administrative authority.

Final administrative decisions can be challenged with either the Council of State or, in the Flemish region, with the ad hoc jurisdiction called the Council for Permit Disputes. These administrative jurisdictions rule on requests in annulment of administrative decisions, whenever the claimant invokes an illegality, an excess or an abuse of powers. Suspension of such decisions as well as provisional measures can also be obtained in certain circumstances, especially in order to prevent material damages to the protected interests.

An oddity is that the administrative fines imposed on the basis of the Walloon Environmental Code are to be challenged with a judicial authority: the criminal court of first instance.

JUDICIAL PROCEEDINGS

Judicial proceedings

- 25 | Are environmental law proceedings in court civil, criminal or both?

Both.

Powers of courts

- 26 | What are the powers of courts in relation to infringements of environmental law?

Both civil and criminal courts are empowered to act on infringements of environmental law.

The Belgian Judicial Code empowers any civil court to impose provisional and interim measures, pending its decision on the merits of a case. The Code also provides that the presidents of the courts of

first instance are empowered to issue the same types of measures on summary proceedings, whenever the claimant invokes and demonstrates the urgency at stake.

Interestingly, a specific federal law – enacted on 12 January 1993 – establishes a right of civil action for the protection of the environment, open to environmental NGOs, authorities with environmental powers and to the public prosecutors' offices, allowing the presidents of the civil court of first instance to impose measures aiming at ordering the cessation of any act or omission jeopardising the environment.

Apart from imposing criminal sanctions, such as imprisonment, fines and the confiscation of illegally acquired economic benefits (which can have very far-reaching financial consequences), the specific environmental legislation commonly empowers criminal courts to also impose material measures, such as orders to remediate polluted sites, orders to shut down operations or prohibitions on carrying out certain professional activities.

The criminal sanctions will vary depending on the category of environmental infringement.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Yes.

Civil claims can be initiated both with civil courts or as an accessory to a criminal prosecution.

The claimant must evidence a fault and damage (personally suffered), and the causal link between these two elements.

In specific cases, non-fault liability regimes may apply (eg, in the case of disruption of neighbourhood and for damage caused by vitiated goods).

Defences and indemnities

28 | What defences or indemnities are available?

Liabilities towards third parties cannot be excluded. Such exclusions or limitations are only possible on a contractual basis, provided they are not excluded or regulated on specific grounds (eg, with respect to soil pollution when transferring rights in rem) or general principles (eg, for being considered to be against principles of public order).

Specific regulatory provisions may identify several persons as being jointly and severally liable (eg, for the management of soil pollution).

Whether waste legislation entails the strict liability of the producer of the waste is still debated in Belgium. However, the statute of limitations for the criminally sanctioned unauthorised abandoning of waste only starts when such waste has been handled in accordance with the applicable law.

Another complex issue is applying the statute of limitations to the act of maintaining unauthorised constructions.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

When a legal entity (eg, a company) does not comply with environmental law, this very often constitutes a criminally sanctioned offence.

According to article 5 of the Belgian Criminal Code, the criminal liability of a legal entity does not exclude the criminal liability of the individuals who acted on its behalf. Hence, the company as well as its directors can be prosecuted.

This is very often the case for the company directors who hold executive powers. Managing the risk of seeing their criminal liability

being invoked requires carefully designed and implemented delegations of powers within organisations.

Criminal liability automatically entails civil liability towards third parties.

The more general rules on the civil liability of company directors are governed by the Belgian Code on Companies and Associations. Articles 2.56 to 2.58 of this Code, inter alia, define the liability thresholds, varying according to the size of the company.

Appeal process

30 | What is the appeal process from trials?

In general, the judicial rules regarding trials organise two degrees of full jurisdiction (concerning both the law and the factual merits of a case), in both criminal and civil proceedings.

Additionally, final judgments can again be challenged with the Supreme Court, but exclusively with respect to legal issues (not concerning the factual merits).

Any court has the possibility of referring prejudicial questions to the Constitutional Court (regarding issues of Belgian constitutional law) or to the European Court of Justice (regarding the interpretation of EU law).

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Apart from the main source of supranational law constituted by the EU's legislation and case law, Belgium is a contracting state to several international conventions related to environmental issues. To name but a few examples, Belgium ratified the International Convention on oil pollution preparedness, response and cooperation (1990), the Convention on Biological Diversity (1992), the Aarhus Convention (1998), the Stockholm Convention on persistent organic pollutants (2001) and the Statute of the International Renewable Energy Agency (2009). It is also worth mentioning that the Global Pact for the Environment is currently under negotiation.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

The Belgian legal system is heavily influenced by developments at international level. Treaty ratification procedures often tend to be complicated though, owing to Belgium's complex constitutional system (often requiring the federal as well as the regional parliaments to approve the treaties through a legislative act).

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

Legal proceedings concerning air pollution against the three regions and the federal state introduced by Climate Case will be pleaded at the end of this year. More recently, the enforcement judge considered that the Flemish plan against air pollution was insufficient (Court of First Instance, Brussels, 28 July 2020). The Flemish region has been ordered to pay €265,000 to Greenpeace, but intends to appeal.

Coronavirus

- 34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

During the lockdown period, delays and time limits for administrative procedures and appeals were extended.

Many court cases were dealt with through written procedures, with the agreement of the parties.

Various measures were implemented by the federal government at different stages in the lockdown period. Some of these measures have given rise to appeals before the Council of State concerning discrimination between different business sectors (see, eg, Council of State, Case No. 247,452 of 27 April 2020, *Stihl*).

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China

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LEGISLATION

Main environmental regulations

- 1 | What are the main statutes and regulations relating to the environment?

The Environmental Protection Law is the basic legislation for environmental protection in China. In terms of pollution prevention and control, there are some laws such as the Marine Environmental Protection Law, the Law on Prevention and Control of Atmospheric Pollution, the Law on Prevention and Control of Water Pollution, the Law on Prevention and Control of Environmental Noise Pollution, the Law on the Prevention and Control of Environmental Pollution Caused by Solid Wastes, the Law on Soil Pollution Prevention and Control and so on. There are also provisions on environmental pollution tort damages and environmental pollution crimes in Chinese civil and criminal legislation. In the National Human Rights Action Plan in China, in a total of three issues, environmental rights are stipulated as an important part of citizens' economic, social and cultural rights.

Integrated pollution prevention and control

- 2 | Is there a system of integrated control of pollution?

According to the provisions of the Environmental Protection Law, China implements comprehensive licence management for enterprises' pollutant discharges. The Ministry of Ecology and Environment in China has formulated the Measures for Pollutant Discharge Permitting Administration (For Trial Implementation) and List of Pollutant Discharge Permit Management for Stationary Sources, implementing comprehensive control of water pollutants discharge, atmospheric pollutants discharge and other pollutants discharged by entities included in the list.

Soil pollution

- 3 | What are the main characteristics of the rules applicable to soil pollution?

The Law on Soil Pollution Prevention and Control came into effect on 1 January 2019 and stipulates the prevention, risk control and remediation of soil pollution. Under the principle of 'whoever pollutes the environment shall eliminate and control the pollution', the parties liable for soil pollution shall have the obligation to carry out the soil pollution risk control and remediation. If the parties liable for soil pollution cannot be identified, the parties with land use rights shall carry out the soil pollution risk control and remediation. The expenses incurred for carrying out and organising the investigation of the soil pollution situation, soil pollution risk assessment, risk control or remediation, pollution effects assessment, remediation assessment, or later-stage management shall be borne by the parties liable for the soil pollution.

Regulation of waste

- 4 | What types of waste are regulated and how?

According to the Law on the Prevention and Control of Environmental Pollution Caused by Solid Wastes, 'solid waste' means articles and substances in a solid or semi-solid state or gases in containers that are produced in production, living and other activities and have lost their original use values or are discarded or abandoned even though they may not yet have lost their usefulness, and articles and substances that are included in the management of solid wastes upon the strength of administrative regulations. For the prevention and control of environmental pollution by solid waste, the state implements the principle that any entity or individual causing the pollution shall be responsible for it, in accordance with law. Manufacturers, sellers, importers and users shall be responsible for the prevention and control of solid waste pollution produced thereby. China has also enacted the Circular Economy Promotion Law, dealing with waste issues in accordance with the principles of reduction, reuse and recycling. Regarding the import of waste, the new revision of the Law on the Prevention and Control of Environmental Pollution Caused by Solid Wastes, which will enter into force on 1 September 2020, stipulates that the state shall gradually realise the basic zero import of solid waste. The importer shall, within the time limit, stop importing or using the equipment included in the list of backward production processes and equipment that has been eliminated from the list of industrial solid waste that has caused serious environmental pollution.

Regulation of air emissions

- 5 | What are the main features of the rules governing air emissions?

The Atmospheric Pollution Prevention and Control Law has made specific provisions on the prevention and control of pollution from burning coal and other energy, industrial pollution, pollution from motor-driven vehicles and vessels, dust pollution and agricultural pollution. Entities that discharge pollutants in the air must obtain a pollutant discharge licence that meets the national and local standards on atmospheric pollutants discharge. In addition, there are requirements for environmental protection and energy efficiency for industrial boilers and coal-fired power plants in China. China also has energy efficiency requirements for buildings.

Protection of fresh water and seawater

- 6 | How are fresh water and seawater, and their associated land, protected?

The Water Law stipulates the development, utilisation and protection of water resources. In China, water resources are owned by the state. The State Council exercises ownership of water resources on behalf

of the state. Water in the ponds of rural collective economic organisations and in reservoirs constructed and managed by rural collective economic organisations shall be used by those organisations. The state applies the systems of water licensing and paid use of water resources according to law. Discharge control of water pollutants is mainly regulated in the Law on Prevention and Control of Water Pollution. In addition to the protection of marine ecology, the Marine Environmental Protection Law also stipulates specific provisions for the prevention and control of pollution caused by land-based pollutants, coastal and marine construction projects, vessel pollution and dumping of wastes.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

China has enacted the Regulations on Scenic and Historic Areas and the Regulations on Nature Reserves to protect natural spaces and landscapes. The term 'scenic and historic area' means an area that has aesthetic, cultural or scientific value, a concentration of natural and anthropological sites and a beautiful environment and is suitable for tourism or for scientific and cultural activities. Scenic and historic areas can be used as the basis of protection. Nature reserves are areas delimited according to relevant laws for special protection and administration in places where typical natural ecological systems and precious, rare and vanishing wildlife species are naturally concentrated, or on dry land, water areas on land and sea areas where protected objects such as natural sites of special significance are situated. Nature reserves may be divided into three parts: the core zone, buffer zone and experimental zone. Entry is prohibited to the core area. Only scientific research and observation are allowed in the buffer zone. Activities such as scientific experiments, educational practice, visits and tourism may be carried out in the experimental zone. In addition, China is currently actively promoting relevant legislation on national parks.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

China has the National List of Key Wildlife Protection, the National Protected List of Terrestrial Wild Animals with Important Economic and Scientific Research Values and the National List of Key Protected Wild Plants, implementing directory management for wildlife. The specific requirements for protection are stipulated in the Wild Animal Conservation Law and the Regulations on Wild Plants Protection. In addition, the Forest Law and the Grassland Law also have provisions for plant protection.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

There are Sound Environmental Quality Standards in China, as well as noise emission standards such as the Noise Standard for Industrial Enterprises and the Environmental Noise Emission Standard for Construction Sites. The main legislation for the prevention and control of environmental pollution caused by noise and vibration is the Law on Prevention and Control of Pollution From Environmental Noise, in which the competent administrative department for environmental protection under the State Council and local people's governments at or above the county level exercise unified supervision and administration of the prevention and control of environmental noise pollution throughout the country and within their respective administrative regions. The competent administrative departments for public security, communications,

railways and civil aviation, as well as harbour superintendency administrations at various levels, shall, within their respective functions and duties, exercise supervision and administration of the prevention and control of noise pollution by traffic and social activities. The prevention and control of odour is mainly stipulated in the Law on Prevention and Control of Atmospheric Pollution.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

Damage caused by environmental pollution is mainly stipulated in the Tort Law and the Civil Code. The Civil Code, which will come into force on 1 January 2021, stipulates that where environmental pollution or ecological destruction causes damage to others, the infringer shall bear the liability for the infringement and be responsible for the restoration of the damage within a reasonable time, and the infringed shall have the right to claim corresponding punitive damages. At present, the system of compensation for damage to the ecological environment is being set up on a trial basis. According to the Reform Plan of Compensation System for Ecological Environment Damage issued by the General Office of the State Council of the CPC Central Committee, ecological environment damage refers to the adverse changes in environmental elements such as atmosphere, surface water, groundwater, soil and forests and biological elements such as plants, animals and microorganisms due to pollution of the environment and destruction of ecology, and the degradation of ecosystem functions formed by the above elements. The scope of compensation for ecological environmental damage includes reasonable expenses such as removal of pollution, restoration of ecological environment, loss of service functions during restoration of ecological environment, losses caused by permanent damage to ecological environmental functions and investigation and appraisal of ecological environmental damage compensation.

Environmental taxes

11 | Is there any type of environmental tax?

The Environmental Protection Tax Law stipulates that within the territory and other sea areas under the jurisdiction of the People's Republic of China, the enterprises, public institutions and other producers and operators that directly discharge pollutants to the environment shall pay environmental pollution tax. There is no double taxation in principle in China.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

There are no specific rules governing hazardous activities in China.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

The Chinese regulation of governing hazardous products and substances is mainly reflected in the safety regulation of hazardous chemicals. China has formulated the Regulations on the Safety Management of Hazardous Chemicals to implement directory management for hazardous chemicals. However, there is no systematic system of safety in the market entry of hazardous chemicals. At present, market access for specific chemicals is prohibited mainly for the purpose of fulfilling relevant international treaty obligations.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

There is an Emergency Response Law in China. People's governments at all levels and their relevant departments, enterprises and institutions are responsible for emergency response activities, including prevention and preparedness, surveillance and warning, response operations and rescue, and post-emergency response rehabilitation and reconstruction in accordance with the provisions of the Emergency Response Law. People's governments at or above the county level establish mechanisms for public monitoring of environmental pollution and organise the formulation of early warning plans. Enterprises and institutions shall, in accordance with the relevant regulations of the state, formulate emergency plans for environmental emergencies and submit to the environmental protection administrative department and relevant departments for recordation.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

The main consideration of environmental factors in the acquisition of assets is the assessment and analysis of land pollution. The Technical Provisions on the Evaluation of Soil Pollution in China issued by the Ministry of Environmental Protection (now the Ministry of Ecology and Environment) provides guidance and norms for soil pollution assessment. When purchasing shares, whether the company belongs to an industry in the list prohibited and limited by the state should be considered, and the environmental credit of the company should be investigated to see if the company has administrative penalties and compensation for environmental pollution.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

In financing, IPO, real estate transactions, company reorganisation and bankruptcy procedures, due diligence is required. The status of the enterprise's environmental compliance, environmental credit, and whether there is a major environmental pollution compensation lawsuit should be investigated so as to control the transaction risk.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

According to the Environmental Protection Law, government agencies and other organisations using fiscal funds shall, when purchasing and using products, equipment and facilities, give priority to those that are energy-saving, water-saving, material-saving or otherwise conducive to protecting the environment. The Circular Economy Promotion Law also stipulates that entities and individuals purchasing goods with funds from the public finances shall give preference to energy-saving, water-saving, material-saving and environment-friendly products and recycled products.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

According to the Law on Environmental Impact Assessment, for construction projects that have an impact on the environment within the territory of China and other sea areas under the jurisdiction of the People's Republic of China, the environmental impact assessment shall be conducted in accordance with the law. The environmental impact report for a construction project must be submitted by the construction entity to the environmental protection administrative department that has approval authority in accordance with the provisions of the State Council.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

Unless the state requires that it is necessary to keep the information confidential, for construction projects that may impose significant environmental impacts and for which it is necessary to work out a report of environmental impacts, the construction entity shall, before submitting the project for examination and approval, seek the opinions of relevant entities, experts and the general public by holding demonstration meetings, hearings or by any other means. The Measures on Public Participation in Environmental Impact Assessment issued by the Ministry of Ecology and Environment make specific provisions for public participation.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

Environmental protection supervision system in China is unified supervision combined with supervision by other departments. The environmental protection administrative department of the State Council generally supervises and administers the national environmental protection work, while the environmental protection administrative departments of the local people's governments at and above the county level generally supervise and administer the environmental protection work within their respective administrative regions. The relevant departments of the people's governments at and above the county level and the environmental protection departments of the armed forces supervise and administer resource protection, pollution prevention and control, and other environmental protection work in accordance with the provisions of the relevant laws.

Investigation

21 | What are the typical steps in an investigation?

Environmental protection regulatory authorities have the power to conduct on-site inspections of enterprises, institutions and other producers and operators that discharge pollutants. The person under inspection shall truthfully report the situation and provide the necessary information. According to Measures for Environmental Administrative Punishment, when investigating and gathering evidence, there shall be at least two investigators who must show their Chinese environmental supervision certificates or other administrative law enforcement certificates and make on-the-spot inspection records and on-site inspection sampling, and produce a monitoring report.

Administrative decisions

22 | What is the procedure for making administrative decisions?

The Measures for Environmental Administrative Punishment stipulate the general procedures of environmental administrative punishment, including case filing, investigation and gathering evidence, case examination, notification and hearing, and handling decisions. At the decision-making stage, the parties shall have the right to make statements and offer a defence, and to request a hearing. In making the final administrative penalty decision, it is also based on the Guidance on Further Normalising the Discretion of Environmental Administrative Punishment issued by the Ministry of Ecology and Environment. The 'three systems' – the administrative law enforcement publication system, the recording system of the whole process of law enforcement, and the legal review system of major law enforcement decisions – shall be fully implemented in administrative procedures.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

The Measures for Environmental Administrative Punishment stipulate that the types of environmental administrative punishment include: a warning; fines; an order to stop production for rectification; an order to stop production, business operation or close down; temporarily withholding or revoking a licence or other certificates that are in nature a licence; confiscating illegal gains or illegal properties; administrative detention; and any other type of administrative punishment as prescribed in any law or administrative regulation. The party concerned may legally apply for an administrative reconsideration or bring an administrative lawsuit against the administrative punishment decision if the party concerned refuses to accept the decision.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

If the party concerned refuses to accept the decision, it may legally apply for an administrative reconsideration or bring an administrative lawsuit against the administrative decision or act. The reasons for the appeal include that the administrative decision made by the environmental administrative department is illegal, the administrative decision should be revoked or changed, and that the environmental administrative department is required to perform certain statutory duties. The provisions of the Administrative Litigation Law shall be applicable to the initiation, acceptance, jurisdiction and execution of environmental administrative litigation, including the procedures for filing a complaint, accepting a case, trial and judgment.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Environmental litigation includes civil and criminal proceedings. Environmental civil litigation is generally filed by the victim because of the damage caused by the defendant's environmental infringement, demanding compensation for damages and stopping the infringement. The Civil Procedure Law also stipulates public interest lawsuits. For conduct that pollutes the environment, infringes upon the lawful rights and interests of large consumers or otherwise damages the public interest, an authority or relevant organisation as prescribed by law and

procuratorate may institute an action in a people's court. The reform plan establishing a compensation system for ecological environment damage stipulates that after damage to the ecological environment has occurred, the people's government shall have the right to bring an action for compensation for damage to the ecological environment to the court. Environmental criminal litigation is initiated by the procuratorate organs in the name of the state to investigate the criminal liability for environmental pollution. Incidental civil lawsuits may also be filed in environmental criminal litigations.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

For violations of environmental law, the court has the power to: conduct criminal trials for environmental crimes; investigate the criminal liability of violators; conduct mediation or trial of environmental civil cases; promote the settlement of environmental civil disputes; adjudicate environmental administrative cases according to law; and supervise the law enforcement of administrative organs.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Laws in China stipulate civil claims against violations of environmental law. If damage is caused by environmental pollution or ecological damage, tort liability shall be borne in accordance with the provisions of the Tort Law. In addition to compensation for losses, the way to bear tort liability includes cessation of infringement, removal of obstruction, elimination of danger, restoration to the original status and so on. The Civil Code, which will come into force on 1 January 2021, stipulates that infringers who, in violation of the law, intentionally pollute the environment or damage the environment, causing serious consequences, the infringed shall have the right to claim corresponding punitive damages from the infringer or compensation from a third party.

Defences and indemnities

28 | What defences or indemnities are available?

According to the Tort Law and Civil Code, which will come into force on 1 January 2021, where any dispute arises over environmental pollution, the polluter shall assume the burden to prove that it should not be liable, that its liability could be mitigated under certain circumstances as provided for by law or to prove that there is no causation between its conduct and the harm. Where the environmental pollution is caused by two or more polluters, the seriousness of liability of each polluter shall be determined according to the type of pollutant, volume of emission and other factors. Where any harm is caused by environmental pollution through the fault of a third party, the victim may require compensation from either the polluter or the third party. The Environmental Protection Law stipulates that the time limitation for instituting an environmental action for damages shall be three years, starting from the time when a party knows or should have known the harm caused to the party.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

According to Interpretation of the Supreme People's Court and the Supreme People's Procuratorate on Several Issues concerning the Application of Law in the Handling of Criminal Cases of Environmental Pollution, the offender can claim that they adopted timely measures to

prevent the loss from expanding or to eliminate pollution; that they have made compensation for all damage; that they have vigorously repaired the eco-environment; that they committed the act for the first time; and that they repent of the offence as justification. They may be determined to fall under minor circumstances and be exempt from charges or criminal punishment. Where an entity commits any crime as specified in this Interpretation, persons who are directly in charge and other directly responsible persons of the entity shall be convicted and punished, and a fine shall be imposed on the entity.

Appeal process

30 | What is the appeal process from trials?

According to the Civil Procedure Law, against a first instance judgment of a local people's court, a party shall have the right to file an appeal with the people's court at the next higher level within 15 days of the date of service of the written judgment. An appellant shall submit a written appeal through the original trial people's court. In civil cases, the people's courts shall apply the 'final after two trials' system in accordance with the provisions of the Civil Procedure Law. Apart from first instance judgment of the Supreme People's Court, appeal may be made to a people's court at a higher level at most once.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

International environmental treaties to which China is a party include the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Convention on International Prior Informed Consent Procedure for Certain Trade Hazardous Chemicals and Pesticides in International Trade Rotterdam, the Stockholm Convention on Persistent Organic Pollutants, the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, the Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention for the Protection of the World Cultural and Natural Heritage, the United Nations Convention on the Law of the Sea, the International Convention on Civil Liability for Oil Pollution Damage, the International Convention for the Prevention of Pollution from Ships, and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter etc.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

As a state that is party to international environmental treaties, it is necessary to comply with its obligations under the treaty, which will naturally have an impact on Chinese law. For example, the Marine Environment Protection Law in China provides for the implementation of a contingency system for major marine pollution incidents. This fulfils China's treaty obligation under article 199 of the United Nations Convention on the Law of the Sea, which stipulates that 'States should jointly develop and promote contingency plans to deal with pollution incidents in the marine environment'.

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UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

The revision of the Law on the Prevention and Control of Environmental Pollution Caused by Solid Wastes will come into force on 1 September 2020. In addition, the Civil Code, which will have special sections on environmental pollution infringement provisions, will come into force on 1 January 2021.

Coronavirus

34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

The Ministry of Ecology and Environment has strengthened the supervision and control of medical sewage and urban sewage in response to the covid-19 pandemic and has issued the 'Notice on stepping up in the supervision and control of medical sewage and urban sewage during the novel coronavirus infection'. The 10 departments jointly issued a work plan for the comprehensive treatment of waste from medical institutions and technical guidelines for the management and emergency disposal of medical waste in the case of pneumonia caused by the new coronavirus infection (for trial implementation), which outline the waste disposal problems in medical institutions. In addition, the Ministry of Ecology and Environment has issued some exemptions or simplified regulations for environmental impact assessment of items and facilities related to epidemic prevention and control. These include three types of exemption from environmental impact assessment, as well as provisions for advanced, active and coordinated environmental impact assessment of service lines.

Dominican Republic

Fabio J Guzmán Saladín and Giselle Pérez-Reyes

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LEGISLATION

Main environmental regulations

1 | What are the main statutes and regulations relating to the environment?

The most important legal instrument is the Constitution of the Dominican Republic, which mandates the preservation and protection of the environment and natural resources, and grants the right to sustainable use of the environment and natural resources.

The Environment and Natural Resources Law No. 64-00 (the Environment Law), enacted in 2000, establishes the basic principles of environmental protection, management and use of natural resources, and the civil and criminal liabilities and penalties.

Additionally, there are other legal instruments that complement the Environment Law, such as:

- the Protected Areas and Biodiversity Law No. 202-04; and
- the technical rules approved by the Ministry of Environment and Natural Resources (the Ministry of Environment) pertaining to:
 - air quality protection;
 - water disposal;
 - forestry management;
 - solid waste management;
 - toxic waste management;
 - noise controls; and
 - water quality and labelling for hazardous substances, among others.

In July 2020, Congress approved the new solid waste legislation. The law will regulate all kinds of waste so that it may be reused. The liability regime of all the actors involved in the generation and disposal of waste is also contemplated.

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

According to the Environment Law, pollution is considered the introduction of contaminants into the environment that may harm humans, flora and fauna and diminish or degrade the quality of the atmosphere, water, soil or other natural resources and goods.

To prevent environmental pollution caused by human activity, the Ministry of Environment regulates all activities that may present a potential risk to the environment by way of an environmental permit. This permit allows the Ministry to enforce an environmental management and adaptation plan to avoid damage to the environment. Moreover, an environmental authorisation describes all impacts that may be generated by the corresponding activity as well as all actions necessary to avoid further risks. Authorisations may only be issued by the Ministry of Environment.

The Ministry of Environment is in charge of waste management in the Dominican Republic. Currently, there is a solid waste management law pending final revisions. This industry is a great opportunity for foreign investors in the Dominican Republic, as it is one of the main environmental problems facing the country as a whole.

The Dominican Republic does not have adequate infrastructure for the final disposal of solid waste; in practice, landfill sites are used, which become sources of contamination that affect the health of the population and strongly impact the surroundings and the environment.

The national plan for solid waste includes the following:

- estimating the costs of prevention, recovery and disposal operations;
- reviewing the amount of solid waste produced;
- finding the appropriate places and facilities for solid waste disposal;
- creating specific strategies and objectives for processing, reduction, transformation, reuse and recycling;
- securing financing;
- creating an evaluation and review procedure;
- developing actions for education and public awareness;
- reviewing other forms of recovery and final disposal; and
- introducing measures to be adopted to achieve these objectives.

The new solid waste management legal framework excludes (1) residual waters and liquid residues that are sent back for secondary treatment, and (2) missions of gases in particulate matters.

The Environment Law establishes penalties for persons or institutions violating the rules, which are classified as infractions. The infractions regarding solid waste and environment are considered very serious. Under this Law, the infractions are considered administrative in nature, unless they are classified as a constitutional environmental crime, according to the article 175.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

The Environment Law punishes any form of soil contamination in Dominican territory. Any individual or corporation that uses chemicals in its operations is required to request an authorisation from the Ministry of Environment. Moreover, the General Rule on Water and Disposal Control includes the levels and parameters of contamination allowed for different industries, which is subject to supervision by the corresponding authorities.

As for clean-up obligations, individuals or companies responsible for an activity that causes soil degradation have an obligation to compensate for the damages. If it is not possible to determine who caused the damage, the compensation process might be carried out by the Dominican government with national funds from the Ministry of Environment's budget.

The Dominican Constitution does not permit the enactment of laws with retroactive effect.

Regulation of waste

4 | What types of waste are regulated and how?

The Ministry of Environment issues regulations regarding environmental management for non-hazardous solid waste. This includes any material in solid, liquid or gas state resulting from any process of material extraction, transformation, fabrication or consumption.

The regulation of non-hazardous waste complements the Environment Law. The law defines hazardous waste as any substance, in any physical state, that has the potential to threaten the health of any organism.

According to the new solid wastes law, the proper definition of waste is: solid, semi-solid, liquid or gas, whose generator or holder requires the disposal of the same. It also requires it should be treated or handled by the proper final disposal systems. Solid waste is that which is not liquid or sludge.

The regulation for non-hazardous solid waste includes guidelines as to the precautions and requirements for handling certain types of waste, such as biomedical or nuclear waste. Some industries and special activities may also require an environmental authorisation that includes an approval for waste disposal.

In general, companies and individuals must protect, conserve, improve and use natural resources and the environment in a sustainable fashion. Everyone is required to eliminate non-sustainable production and consumption practices that undermine the reduction of waste.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

The current air emission legal framework in the Dominican Republic is based on two main regulations: the Environmental Regulation on Air Quality and the Environmental Regulation on Control of Atmospheric Emissions from Fixed Sources.

The Environmental Regulation on Air Quality determines the maximum amount of pollutant concentration permitted. The regulation is applicable to industries, businesses, projects, services or any activity that may cause pollution and affect air quality. Its overall purpose is the protection of public health. This regulation establishes limits for certain types of pollutants, as indicated in the following table.

Pollutant	Permitted limit	Time period
SO ₂ (sulphur dioxide)	100mg/m ³	Annual
CO (carbon monoxide)	10,000mg/m ³	8 hours
Pb (lead)	2mg/m ³	Annual

The Environmental Regulation on Control of Atmospheric Emissions from Fixed Sources determines the maximum permitted amount of atmospheric emission from fixed sources. This acts as a compliance tool to satisfy the standards set by the Environmental Regulation on Air Quality.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

According to the provisions of the Dominican Constitution, water is part of the nation's heritage. Generally, rivers, lakes, lagoons, beaches and coasts are considered public property and accessible to the public. The Dominican Constitution also stipulates that the law will set conditions to regulate water usage.

According to Law No. 305, dated 23 May 1968, the 60-metre coastal strip that runs parallel to the sea is considered part of the nation's

public property, which is therefore accessible to the public. The law defines this public property area as 'The maritime-terrestrial zone or space comprised between the low tide, heeling or maximum equinoctial living line and the limit to where the waves reach in the greatest known storms or, when it exceeds it, that of the equinoctial maximum living high tide line.' Similarly, there are regulations governing the existence and protection of surface waters and coastal areas.

The Ministry of Environment has established technical regulations, which include quality parameters and maximum use permitted. For example, the Regulation on Underground Water Quality and Discharge Control seeks to protect, conserve and improve the quality of natural water bodies, underground bodies of water, in particular, in order to guarantee the safety of its use and promote the preservation of adequate conditions for the development of ecosystems associated with water.

There are limits on the withdrawal and discharge of water and the percentage of effluent in relation to the receiving body of water, which are controlled by the Ministry. Moreover, controls are established depending on the particular conditions of the receiving body of water, its capacity to assimilate pollutants, yearly level variations and the characteristics of the water basins.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

The Environment Law and Sectorial Law No. 202-04 on Protected Areas regulate protected areas in the Dominican Republic. In addition, Executive Order 571-09 has created new protected areas, which must also be considered.

Protected areas consist of plots of land or sea especially dedicated to the protection and preservation of significant elements of biodiversity and natural or cultural importance.

The law contemplates six categories of protected areas whose objectives and uses correspond to the categories established by the International Union for the Conservation of Nature. The six categories are as follows:

- the protection of certain characteristics such as scientific reserves (Category I);
- national parks (Category II);
- natural monuments (Category III);
- wildlife refuges (Category IV);
- natural reserves (Category V); and
- protected landscapes (Category VI).

The Constitution and the Environment Law stipulate that the Dominican government has the right to expropriate areas in order to preserve the environment. If expropriated, the owners must be duly compensated for their property at fair market value.

Depending on the type of protected area, the law may restrict the use and activities within said protected areas. In this sense, every activity or construction to be made within the limits of protected areas must be approved by the Ministry of Environment.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

The Dominican Republic is a signatory to the Convention on International Trade in Endangered Species of Wild Flora and Fauna, which regulates the import and export of wild species listed in the treaty throughout the Dominican territory. The Environment Law pays particular attention to wild flora and fauna and establishes a special kind of protection; it encompasses the basic provisions for the protection of flora and fauna

in the country, declaring such protection a national priority and regulating the use of flora and fauna through the issuance of permits.

The Environment Law also establishes particular protection for fishing and hunting. Fishing is regulated by the resolutions issued by the Ministry of Environment. These resolutions establish periods where such activities are permitted and set limits on the fishing seasons for certain species such as lobster, conch and crab. In regard to hunting, there is a general prohibition on hunting, except in the case of species that are considered invasive, such as ferrets.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

In the Dominican Republic, the competent authorities with regulatory power on these matters are the Ministry of Environment, the various municipalities and the national police. These institutions are responsible for supervising the correct management and use of the instruments that could produce disturbing and damaging noises, odours or vibrations to the environment in residential, urban and rural areas.

According to the environmental regulation for noise protection, the maximum levels permitted by area in the country are the following:

- quiet area (Category I): maximum 60 decibels permitted during daytime;
- residential area (Category II): maximum 65 decibels during daytime;
- business area (Category III), which includes industrial and business areas: maximum 70 decibels during daytime; and
- road areas (Category IV): up to 70 decibels during daytime.

Noises originating from ambulances, car horns and sirens from security entities such as the police are excluded from the regulatory provisions of the Environmental Regulation for Noise Protection.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

Dominican legislation recognises civil, criminal and administrative liability for those whose actions or omissions cause damage to the environment.

In accordance with the Environment Law and the 'polluter pays' principle, anyone who causes damage (loss, reduction or deterioration) to the environment, natural resources or any of its components is held liable.

When a licence or authorisation holder inflicts damage on the environment, the process to determine the liability for the damage caused would depend on the terms' limits or compliance framework set by the authorisation; therefore, if the authorities determine non-compliance in such terms they could penalise the holder.

Alternatively, if the polluter does not hold an environmental licence or authorisation, any interested or affected party has the right to sue the polluters for the damage caused. In this case, the judge could request input from an expert witness to assess the amount of damage involved in the infringement.

Environmental taxes

11 | Is there any type of environmental tax?

The tax authorities together with the Ministry of Environment have not yet implemented the necessary environmental taxes to directly prevent activities that may have negative effects on the environment.

The first green tax established in the Dominican Republic was enacted in the 2012 tax reform. This reform established a tax on vehicles based on the percentage of the vehicle's total value and its emissions of CO₂ according to the table below.

CO ₂ emissions	Tax payable
Less than 120g CO ₂ /km	0%
More than 120 up to 220g CO ₂ /km	1%
More than 220 up to 380g CO ₂ /km	2%
Over 380g CO ₂ /km	3%

The Ministry of Environment has established administrative fees for the issuance of environmental permits on certain activities and projects. These fees are determined by taking into consideration the investment of the project and its main purpose.

Alternatively, the Environment Law and Renewable Energy Law No. 57-07 established significant fiscal incentives and tax exemptions for investment projects that aim to protect and improve the environment, such as renewable energy projects, environmentally friendly technologies or recycling projects.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

To issue the appropriate environmental licence, the Environment and Natural Resources Law No. 64-00 (the Environment Law) requires an environmental impact study for companies or individuals interested in developing activities that involve the importation, production or transportation of toxic, radioactive, corrosive or dangerous substances.

The Ministry of Environment and Natural Resources (the Ministry of Environment) has an updated list of products and substances considered hazardous for the environment and public health, such as radioactive and chemical substances, as well as others with similar conditions, which are prohibited from guaranteeing the safety of the environment and the people.

In addition to the Environment Law, the Health Law also regulates the use of hazardous equipment and activities in health facilities (ie, X-rays, MRI, imaging).

Additionally, to import chemical products, the Ministry of Environment must provide a certification and clearance stating that the products or substances are not prohibited in the Dominican Republic.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

Under the Environment Law, toxic waste is defined as any material, in any physical state, containing a significant amount of substances that are or may be life-threatening when released into the environment, or any material that can affect human health, quality of life, natural resources or ecological balance when mishandled, owing to its corrosive, toxic, poisonous, reactive, explosive, flammable, biologically harmful, infectious, irritant or other harmful characteristic.

The Ministry of Environment has enacted a code for the transportation of hazardous substances and materials to control the use of such substances. This code contains the parameters and conditions under which these substances can be transported (transportation time, routes, inspections and labels, among others). Also, to be able to identify all hazardous substances, the Ministry has published a Labelling of Hazardous Substances and Materials Code, which is based on the Regulation for the Management of Chemical Substances and Dangerous Waste.

Additionally, the Dominican Republic is a signatory of international agreements, including:

- the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal;
- the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade;
- the Stockholm Convention on Persistent Organic Pollutants; and
- the Minamata Convention on Mercury.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

In the Dominican Republic, all production activities are regulated by the Job Safety and Health Regulation Act No. 522-06. This act aims to regulate the conditions in which labour activities must be carried out to avoid accidents and health issues at the job site. The provisions in the regulation apply nationwide to all jobs. This regulation also grants rights and establishes obligations for employers and employees alike. The employer has the responsibility of providing safe and healthy workstations, which must be approved by the Ministry of Labour. The government institution in charge of supervising the correct enforcement of this regulation is the Industrial Safety and Hygiene Committee of the Ministry of Labour.

Moreover, an environmental permit is required for all industrial activities. Its validity and enforcement will depend on the compliance with an environmental management and requalification programme approved by the Ministry of Environment.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

The main difference between acquiring shares and purchasing an asset is that the purchaser of the shares will acquire them along with all the liabilities associated with those shares (ie, any company liability to the extent of the amount of shares acquired). Alternatively, in an asset purchase, the purchaser would only acquire the liability associated with that asset.

Nonetheless, from an environmental perspective, it is necessary to determinate the type of asset acquired, since an asset could hold liability to environmental damage (ie, the extent of the liability could encompass the real estate where the damage occurred).

Furthermore, in M&A transactions, it is important to pay special attention to the consequences of the strict and joint civil liabilities regimes for environmental damage and to the validity of environmental licences. In general, the following issues should be reviewed:

- environmental authorisations (scope and conditions);
- environmental compliance of the corresponding authorisation before the Ministry of Environment and Natural Resources;
- technical compliance reports; and
- investigations of civil and criminal suits related to environmental damage.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

Under Dominican law, a seller is not required to disclose environmental problems to the purchaser in a merger or takeover transaction. Nevertheless, such disclosure is normally required by contract and covered by warranty clauses.

Environmental provisions set forth in the Environment and Natural Resources Law No. 64-00 (the Environment Law) are of public policy; therefore, any agreements between the parties that minimise liabilities in the case of environmental damage will have no effect on third parties. However, it is possible to limit liability to an agreement between the parties, but such provisions will only be valid between them.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

In addition to complying with the Environment Law, parties involved in public procurement bids must abide by the special provisions established in the terms of reference and tender contracts. For instance, in cases such as coal refining and dam construction, the terms of reference and tender contract would include an environmental clause that must be followed by the developer. When drafting the terms of reference and tender contract, the government must specify the conditions that protect the environment and prevent environmental risks or damage, such as the prevention of waste, CO₂ emissions and land use, among other variables.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

A developer must obtain the corresponding environmental authorisation before starting any activity that may affect the environment and natural resources, including non-industrial projects. Activities are divided into four categories (A, B, C and D). Categories A and B (environmental licence and environmental permit, respectively) require a stricter environmental assessment, while categories C and D (environmental authorisation and minimal impact registration certificate, respectively) are used to regulate activities with less environmental impact.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

According to the regulations on environmental authorisations, in order to obtain any permission or licence a project developer should complete the following procedure:

- submission of request of the environmental authorisation before the Ministry of Environment and Natural Resources;
- inspection by government technicians;
- issuance of the terms of reference, if applicable, which include the basis for the preparation of an environmental assessment;
- preparation and filing of the correspondent environmental assessment; and
- public hearings, for those projects with a high possibility of causing significant environmental impact. In these cases, and after such hearings take place, the public is entitled to present any comments and objections during a 15-day period.

Once these steps are completed, it is up to the Ministry to issue or reject the corresponding authorisation, which will contain the compliance obligations to be followed by the developer.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

The Ministry of Environmental and Natural Resources (the Ministry of Environment), as the governmental authority that regulates all matters related to the environment, is in charge of developing the policies regarding the environment, ecosystems and natural resources. It is the only institution capable of issuing environmental permits and imposing administrative penalties for infringements of the law (article 15, Law No. 64-00).

There are vice-ministries in the Ministry in charge of different environmental matters such as:

- soil and water;
- environmental management;
- forestry resources;
- protected areas and biodiversity; and
- coastal and marine resources, among others.

Investigation

21 | What are the typical steps in an investigation?

The Ministry of Environment audits, supervises and investigates the compliance with environmental regulations. The Ministry has the authority to audit, supervise and investigate any activity performed by an individual or company, which must, in turn, provide access and information to the environmental authority. The Ministry can also rule on the type of administrative liability, if any, that applies to each infringement of the law, subject to due process.

If a third party commits an offence or crime against the environment, the Attorney General for the Defence of the Environment and Natural Resources can pursue a criminal action and start the corresponding investigations in search of evidence.

Inspectors from the Ministry of Environment are empowered to carry out periodic inspections and audits to ensure compliance with the environmental management programme established in the environmental authorisation, as well as all the environmental regulations.

This authority could also investigate any infringement or crimes related to the environmental legislation. Also, they are entitled to take actions such as projects closure or cancellation of activities to prevent an imminent damage to the environment as provided by the control regulations established by Resolution 18-2007 dated 15 August 2007.

Administrative decisions

22 | What is the procedure for making administrative decisions?

Actions that have any administrative decision must respond to the principle of legality of the administration; they must be in accordance with legal regulations and jurisdictional decisions. In addition, individuals or entities have the faculty to pursue revision, modification or reversal of any decision. All these administrative decisions can be challenged through administrative and judicial appeals provided under Dominican legislation.

During the decision-making process, especially prior to the issuance of an environmental authorisation, the authority is entitled to request additional information to the parties involved to complete the file and have better criteria to make a final decision.

Moreover, according to Law No. 107-13, everyone has the right to be heard by the administration, more so in the case of an unfavourable administrative decision against them.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

The Ministry of Environment may impose several penalties through administrative action in the case of non-compliance.

Penalties can include:

- closure or suspension of activities;
- fines;
- publication of penalty;
- confiscation of equipment;
- material; and
- vehicles and products, among others.

The environmental authority can suspend or cancel an activity whenever there is evidence of non-compliance with the environmental legislation.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

The principle of legality should always be considered in every decision made by the regulatory authority. Parties have the right to appeal against decisions taken by the regulators when provisions are arbitrary or abusive.

These remedies are called reconsideration or appeal instances when they are filed with the Ministry of Environment. The reconsideration is decided by the same authority that has granted the decision; the instance of appeal will be decided by the immediately superior entity. In order to start a court appeal, it is not mandatory to conclude the regulator's instance. A decision may be appealed to an administrative court, and the decision of the latter may be also appealed to the Superior Administrative Court.

In addition, if the parties involved deem that the law was wrongly applied, the final judgment can be appealed before the Supreme Court of Justice. Finally, if the parties claim that there has been a breach of the Constitution, they can appeal before the Constitutional Court.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Infringements of the Environment and Natural Resources Law No. 64-00 (the Environment Law) and complementary regulations can result in criminal, civil and administrative penalties.

In civil and criminal cases, courts of first instance will have jurisdiction.

Administrative courts will have jurisdiction in the following cases:

- liability of the state or government institutions, be it for their lack of adherence to or compliance with decisions made by the qualified judicial authorities, which decide controversies related to actions inherent in their functions;
- administrative acts implemented by government institutions; and
- judicial appeals of administrative acts derived from the Ministry of Environment and Natural Resources as the regulatory entity on these matters.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

Dominican courts are able to rule on environmental infringements to the extent that an offender would be held liable. Judges may impose compensation and restoration measures, imprisonment and fines.

Criminal infringements are established by the criminal courts and they can impose the corresponding penalties as established by the Environment Law and the Criminal Code of the Dominican Republic, for example:

- imprisonment from six days to three years;
- confiscation of tools, equipment, raw materials, machinery, vehicles and products obtained through illegal activities;
- enforcement of the liquidated damages in favour of the harmed claimants;
- enforcement of the destruction of the illegal facilities operating without the corresponding environmental authorisation; and
- demanding the payment of a penalty ranging from the equivalent of one-quarter of the minimum wage to the equivalent of 10,000 times the minimum wage.

On the other hand, civil courts have jurisdiction to assess the damages and compensation measures attributable on the basis of the 'polluter pays' principle, in accordance with the provisions established by the environmental legislation and civil law.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Civil claims in the Dominican Republic regarding infringements of environmental law are allowed. Civil actions may be filed requiring the polluter to recover or compensate for the environmental damage caused to all parties affected by the polluting activity.

As for contractual violations, the defaulter could be condemned to pay for damage and injuries as a result of non-compliance or delays in contractual compliance.

Regarding non-contractual obligations, according to article 1382 of the Dominican Civil Code, the victim must be compensated by the injuring party. On environmental liability, objective liability prevails in every circumstance where the 'polluter pays' principle can be applied.

Defences and indemnities

28 | What defences or indemnities are available?

In relation to the environmental civil liability, the provisions set forth in the Environment Law are of public policy, meaning that agreements between the parties that limit liabilities would have no effect on third parties. Even when it might be possible to limit liability through an agreement between the parties, such provisions will only be valid between the parties.

On environmental matters, there would be joint liability between the polluter and the government officer who authorised the activity that caused damage to the environment. This joint liability also applies to all parties involved in causing damage to the environment.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

In accordance with Dominican commercial laws, company representatives are deemed liable for fraudulent actions during their administration. The environmental regulations establish penalties for

companies and their representatives when their decisions cause environmental damage.

Appeal process

30 | What is the appeal process from trials?

All first instance judicial rulings are subject to an appeal. The appeal must be made within a month of receiving the notice of the ruling. A decision from the court of appeal may be subject to an appeal before the Supreme Court of Justice, merely on legal grounds. Finally, the ruling rendered by the Supreme Court of Justice can be challenged (only if there has been a violation of the Constitution) by an appeal to the Constitutional Court.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

The Dominican Republic, as a member of the international community, encourages and is bound by various conventions and declarations regarding environmental matters, namely:

- the Convention on International Trade in Endangered Species of Wild Flora and Fauna;
- the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78);
- the Convention on the Conservation of Migratory Species of Wild Animals;
- the Montreal Protocol on Substances that Deplete the Ozone Layer;
- the Vienna Convention for the Protection of the Ozone Layer;
- the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;
- the Rio Declaration on Environment and Development;
- the United Nations Framework Convention on Climate Change;
- the Convention on Biological Diversity;
- the United Nations Convention to Combat Desertification;
- the Kyoto Protocol;
- the Stockholm Convention on Persistent Organic Pollutants; and
- the Dominican Republic-Central America Free Trade Agreement (DR-CAFTA).

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

When an international treaty is ratified by Congress, the national legislation and related regulations in force must be amended according to the provisions of the incorporated treaty. There are cases when it has been necessary to adapt the national legislation in order to conform with international provisions. For example, the DR-CAFTA has required that some provisions be adapted and some regulations be enacted at the corresponding ministries to abide by the trade agreement.

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

There are no updates at this time.

Coronavirus

- 34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

The government has established a general protocol to reduce the spread of covid-19 in working areas and public places. Additionally, many specialised industries, such as free zones and tourism, have their own protocols, addressing every relevant issue for them.

We are expecting a regulation from the Ministry of Environment and Natural Resources regarding the use and disposal of gloves and masks, and their final destination, without affecting the environment or being contagious for humans.

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LEGISLATION

Main environmental regulations

1 | What are the main statutes and regulations relating to the environment?

Environmental legislation in Germany is mostly determined either by directly applicable EU regulations (eg, on chemicals, waste shipments or food contact materials) or EU directives requiring national implementation, such as most product, nature conservation or water quality regulations. This is to avoid 'environmental dumping' across the European Union (ie, production relocation in EU member states with less environmental enforcement).

German environmental regulations primarily concern soil and water protection, nature protection and mining laws (eg, gas underground storage, submarine cables and geothermal installations).

Environmental protection has been set out in the Constitution as a government objective since 1994. Environmental protection rights, however, cannot directly be derived from the Constitution, but only from the relevant environmental laws. The adoption of a comprehensive and uniform Environmental Code failed in 2009 and has not been pursued further since. As a result, industrial operators are subject to the relevant EU, federal, state and sometimes local regulations.

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

There is a system of integrated control of pollution regarding industrial and other activities that are prone to cause environmental impacts subject to permits under the Emissions Control Act; for complex infrastructure projects of all types (road, rail, waterways, harbour or mining installations, high-voltage electricity lines) the related issues are dealt with in the plan approval. These permits and plan approvals are 'integrated', meaning that they generally regulate all environmental concerns in one decision.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

Liability

The Federal Soil Protection Act provides for liability for hazardous soil changes, historic and suspected soil pollution and groundwater contamination caused by soil pollution. The following parties are liable: the polluter; the owner and (under certain conditions) the former owner of the site; and the tenant. In exceptional cases the shareholder of the owning company can be liable (eg, malicious undercapitalisation). The liability of the listed parties is joint and several and regardless of their contribution to (suspected) contamination to avoid the taxpayer having

to assume such costs. The authorities select at their lawful discretion the liable party and the measures that must be taken, usually at the liable party's expense. Site owners are often held liable to ensure efficient and fast action (deep pocket principle).

Measures

Measures such as investigation, remediation or containment may be limited by the permissible use of the site, proportionality or the value of the site after decontamination. In Germany, thresholds for contaminants are regulated by an ordinance, environmental guidelines and standards. The applicable limits are, therefore, often subject to compromise with the authorities and made subject to remediation agreements determining measures, objectives and deadlines.

Regulation of waste

4 | What types of waste are regulated and how?

Waste

'Waste' is all substances and objects that their owner discards, intends to discard or is obliged to discard. 'Discarding' means that the owner has lost interest in the material, disposes of it or leaves it to third parties (eg, municipal waste collections or recyclers) for recovery or disposal, such as incineration plants or recycling facilities. 'Compulsory waste' is any substance or object that is no longer used for its original purpose and is proven to be an environmental hazard and must therefore be disposed of.

Waste hierarchy

The Circular Economy Act (CEA) sets out the main provisions on waste handling, prevention, preparation for reuse, recycling and disposal. According to the 'waste hierarchy', the reuse or recycling of waste is more desirable than its disposal. 'Recycling' includes the preparation or processing of waste with the objective of reuse for its previous purpose (substance recovery) or a new purpose (eg, energetic recovery) excluding waste used as a combustible or filling material. Hence, the CEA requires that recycling is promoted and includes an obligation to collect different types of waste separately (paper, glass, (plastic) packaging, biowaste, batteries, electr(on)ical equipment, etc). As Germany is not rich in resources such as metals or rare earths, emphasis is placed on the recovery of valuable materials and resources. Waste disposal must be done in a safe and environmentally sound way (either by incineration in an approved installation or a landfill site after having been pre-processed) and must be comprehensively documented.

Regulation of air emissions

- 5 | What are the main features of the rules governing air emissions?

Emissions Control Regulations

The reduction of air pollution is one of the EU's main objectives. In Germany, rules and thresholds for air emissions of industrial installations or other emissions sources are regulated in the Federal Emissions Control Act, specific ordinances and the Technical Instruction on Air Pollution. Thresholds for nitrogen oxide and particulate matter apply to city traffic (eg, PM10: 50µg/m³ daily limit value not to be exceeded more than 35 times per year; 40µg/m³ average annual limit value).

Driving bans

The relevant air emissions thresholds were exceeded in 66 German cities in recent years. As a result, the European Commission litigated against Germany before the European Court of Justice. Diesel cars and the failure to control and act against their producers have been identified as major contributing factors in this non-compliance. In an unprecedented chain of court actions an environmental NGO successfully sued major German cities to oblige them to issue bans on older diesel and petrol vehicles. The rulings were implemented in 2019 and, so far, several German cities have issued driving bans in certain areas or implemented further measures to reduce air pollution.

Industrial installations

Certain industrial installations (among them large combustion plants) are, based on the EU Industrial Emissions Directive (current consolidated version of 6 January 2011), under a continuous obligation to be adjusted based on the Best Available Techniques, subject to regular monitoring by the authorities and publication of the results.

Buildings

Buildings have to comply with ever stricter energy efficiency requirements. These also apply to modernisation measures.

Protection of fresh water and seawater

- 6 | How are fresh water and seawater, and their associated land, protected?

The Water Management Act requires the sustainable management of bodies of water. The use of water (ie, its withdrawal or discharge) requires a permit and is charged in order to incentivise water conservation. The discharge of wastewater and other substances into bodies of water or sewage systems is heavily regulated. For instance, the Groundwater Regulation specifies criteria to control the amounts of nitrates in groundwater. In 2018, the European Court of Justice condemned Germany because of its failure to reduce groundwater pollution from nitrates and the European Commission is threatening enforcement, which could result in daily penalties of up to €850,000.

Key issues

The interpretation of water laws (eg, the EU Water Framework Directive's 'good status' standard and the maintenance of water standards, current consolidated version of 20 November 2014) and their implementation into German law are currently the 'environmental high-lights' and key challenges in industrial and infrastructure projects. One issue is whether the quality of groundwater has deteriorated if only one substance threshold has been exceeded or how to handle already exceeded thresholds. The latter would hinder any new projects in bodies of water that do not meet the required threshold.

Protection of natural spaces and landscapes

- 7 | What are the main features of the rules protecting natural spaces and landscapes?

The requirements for natural spaces and landscapes are regulated by the Federal Nature Protection Act and ordinances of the German states specifically regulating protected areas and the applicable rules and prohibitions.

Protection of flora and fauna species

- 8 | What are the main features of the rules protecting flora and fauna species?

The protection of flora and fauna species is regulated in two ways: first, certain habitat types and species are protected within specific areas called 'Flora-Fauna-Habitat areas' or 'Natura 2000 sites' (based on the EU Conservation of Natural Habitats and Wild Fauna and Flora Directive, current consolidated version of 1 July 2013, and the EU Conservation of Wild Birds Directive, current consolidated version of 26 June 2019); second, protected species are protected as individuals against impairments (eg, killing, impacts on reproduction, breeding and migration). Natura 2000, however, is the biggest challenge for projects.

Natura 2000

The 5,266 German Natura 2000 sites cover more than 15.4 per cent of Germany's land area and almost half of its marine area. If a project is planned near a Natura 2000 site, the relevant environmental authority must assess whether the project could have adverse effects on the site. The project developer must generally provide comprehensive inventory of relevant habitats and species, (inter)relations and (expert) documentation for such projects. Natura 2000 has therefore been an effective instrument for environmental NGOs who want to challenge and delay infrastructure, industrial and energy projects. For example, the approval for the German motorway section of the German-centric Hessisch Lichtenau – ultimately connecting Polish with the Benelux states' motorways – took more than 15 years owing to three court procedures based mainly on non-compliance with Natura 2000-related issues.

Noise, odours and vibrations

- 9 | What are the main features of the rules governing noise, odours and vibrations?

The basic legislation for noise, odour or vibration emissions is the Federal Emissions Control Act. It addresses emissions of all types of (industrial) installations (including eg, animal-breeding plants), but also includes regulations for transport carriers (routes) and vehicles. Ordinances, administrative provisions or technical guidelines supplement the Act such as, in particular, the Technical Instruction on noise protection with limit values, parameters for the calculation of noise and noise measurement procedures or the Administrative Provisions on odour emissions. Vibrations are regulated in technical norms regarding protection of humans in buildings and for prevention of building damage.

Basic rules

There is no general regulation for protection against traffic noise, but noise abatement is based on various approaches and regulations for noise from roads, railroads or aircraft. As a rule, noise is calculated, not measured. Yet, the implementation of the EU Environmental Noise Directive takes a different, comprehensive approach on noise caused by distinct sources. Noise limits are specifically set in permits for industrial plants or plan approvals for infrastructure projects as well as in zoning plans and building permits.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

The Environmental Damage Act is based on the 'polluter-pays' principle and gives incentives to operators to adopt measures and develop practices to minimise the risk of environmental damage. Environmental damage is defined as damage to habitats and species (biodiversity damage), surface or groundwater or soil. It depends on specific occupational activities listed in the Annex and applies regardless of fault if a causal link can be established between activity and damage. For activities not listed, the liability relates to biodiversity damage only and the responsible party must have acted with intent or negligence. As Germany has specific regulations on soil and water contamination, the Environmental Damage Act is mainly relevant for biodiversity damage.

Environmental taxes

11 | Is there any type of environmental tax?

Environmental taxes are designed to incentivise a scarcer use of natural resources. Environmental taxes in Germany are lower than in other EU countries. In 2019, environmental taxes in Germany amounted to €60.7 billion including energy tax, taxes on electricity and vehicle tax. The energy tax (€40.7 billion) applies to any purchase of mineral oil or biofuels. Electricity taxes (€20.5 per MWh) are levied from electricity consumers and resulted in revenues of €6.7 billion in 2019. Vehicle tax relates to vehicles used on public roads. There are also charges, for example, for certain public services (waste and wastewater treatment), the use of resources (the industrial abstraction of groundwater for cooling purposes) and plastic bags in shops.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

Hazardous activities are not a category under German law, but rather the operation of (industrial) installations or projects (including underground activities) that potentially cause environmental risks or nuisances for nearby residents or the general public. Such installations usually require a permit under the Emissions Control Act or the Mining Act. The main activities under the Emissions Control Act, inter alia, relate to generation of electricity, processing of steel, quarries, production of chemical products, food, mineral oil refining, storage of certain substances or waste processing above certain thresholds.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

Dangerous chemicals are, inter alia, subject to the EU Regulation on Registration, Evaluation and Authorisation of Chemicals (current consolidated version of 20 April 2020) establishing the principle 'no data, no market'. That is, chemicals must not be placed on the Union market before they have been registered with the European Chemicals Agency after a comprehensive assessment of substance properties (technical dossier) and impacts (chemical safety report) to be provided by the companies producing or marketing such substances.

Substances of very high concern are to be replaced in the long term because of their hazardous features. They are ultimately listed in Annex XIV (Authorisation) with a sunset date for their marketing. Any longer use requires an application for authorisation well before the sunset date. Annex XVII (Restriction) contains conditions for or prohibition

of the manufacture, use or marketing of certain substances owing to unacceptable risks to human health or the environment caused by such substances. Further, comprehensive information requirements apply in both cases.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

Installations particularly prone to hazards to human health and environmental damage ('Seveso installations') are subject to specific organisational and action obligations considering various scenarios and reporting obligations. For these installations, comprehensive information sharing with the authority and the public must be set up before and after any incident or accident. A regular issue with these installations or the neighbouring buildings and uses are the distance requirements that must be observed.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

Emissions

Environmental aspects in M&A transactions vary corresponding to the business activity of the target company. For industrial installations emissions (air, noise) regularly play a key role, especially of the installations with greater environmental impact (being subject to the EU Industrial Emissions Directive), which must be adapted to the Best Available Techniques regularly and which are inspected repeatedly by the authorities. Here, any backlog or issue may become expensive for a purchaser. Also, the allocation of emissions allowances under the European Emissions Trading System in the new trading period (starting 2021) and possible challenges of the allocation decisions are worth considering given the rising value of the certificates.

Contamination

Soil and groundwater contamination liability is a regular issue, especially at older industrial sites. In this case, besides liability, subsidies may also be taken into account.

Energy and water

Energy generation and costs and the availability and use of water have become important issues with the phasing out of nuclear and coal-generated energy and less water being available due to the summer draughts and the sophisticated legal requirements.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

The environmental aspects depend on the business or activities concerned. In financings of industrial installations often the validity and enforceability of permits is key. In real estate transactions soil and building contamination is a regular issue and, increasingly, questions of energy supply and generation (renewable energies) and energy-efficiency requirements. Bankruptcy proceedings may impact on existing permits since the operator is no longer able to financially guarantee compliance with the environmental obligations.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

The public procurement regulations allow for inclusion of environmental aspects at all stages of the procurement procedure: the awarding authority can already, when selecting the contract object, choose an environmentally friendly alternative or incorporate environmental requirements as technical specifications. As a bidder qualification, certain standards for environmental management can be required to the extent relevant for the performance of the contract. Moreover, environmental criteria can be included in the tender evaluation as award criteria or, ultimately, in the conditions for the contract performance (eg, regarding the way and manner in which the goods are delivered).

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

The construction, modification and operation of projects listed in the annex of the Environmental Impact Assessment Act or relevant state laws (eg, projects affecting public roads) that could have an adverse effect on the environment require an environmental impact assessment (EIA). The procedure and requirements are regulated in the EIA Act. Projects subject to an EIA encompass, for example, (renewable) energy projects, railways, airports, sugar, paper, tiles or steel production, breeding of animals exceeding certain numbers, holiday complexes and gravel pits. The EIA is part of the permit proceeding for a planned activity and covers (non-)industrial projects. The conditions of an EIA vary in accordance with the scope of the project. For example, a windfarm with 20 facilities (higher than 50 metres) high requires a full (mandatory) EIA, while a windfarm with only 36 facilities triggers an EIA related to the conditions of the envisaged location ('screening'). Several small projects may fall within the scope of the EIA requirement in order to avoid 'Salami tactics'. EIAs often give rise to actions by environmental NGOs.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

The EIA begins with the authority's decision on whether to perform an EIA. The project developer submits the documentation for assessing the project covering all its features, such as size, performance, location and potential environmental impacts. Then, the scope of the investigation is defined and upon application, discussed with all involved authorities and stakeholders, such as neighbours, environmental NGOs and affected municipalities ('scoping'). On the basis of the scoping, the investigations, reports and expert opinions are performed. The final EIA report, which the project developer submits to the authority, contains likely environmental impacts and, inter alia, a description of the environment, the location and measures taken to prevent the occurrence of adverse environmental effects. Relevant reports and recommendations as well as the EIA report are made subject to a public hearing. The EIA report is considered by the authority when issuing the approval for the project as well as statements. The conclusions drawn from the EIA report by the authority can be challenged by the affected parties together with the final approval. The decision to approve or reject the project must be published by the authority.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

Federal level

On the federal level, the Ministry for the Environment, Nature Conservation and Nuclear Safety is responsible for the government's environmental policy, with direct or indirect support from the following.

- The Environment Agency gathers data concerning the environment, commissions expert opinions and provides policy advice to federal bodies and information to the general public. It deals with, inter alia, waste avoidance, climate protection and pesticide approvals.
- The Agency for Occupational Health and Safety is responsible for all matters involving occupational safety and health, chemicals and biocides. It advises policymakers (eg, under the EU Regulation on Registration, Evaluation and Authorisation of Chemicals) and performs functions concerning hazardous substances and product safety legislation.
- The Federal Institute for Materials Research and Testing is a scientific and technical institute undertaking research in key areas of safety engineering, testing methods and standardisation (eg, relating to eco-design requirements for energy related products). It is responsible for the implementation and evaluation of physical and chemical tests of materials, including the preparation of reference processes and materials. It further issues notifications in the rank of technical rules, on product safety standards.

State level

The 16 German states have their own ministries for environment supplemented by state authorities. They are responsible for the execution of environmental laws and are split into higher and lower authorities. The higher authorities issue permits for industrial installations, plan approvals for infrastructure projects and water management and ensure the protection of nature in a region, among other things. The lower authorities are either responsible for the district or on a municipal level, and deal with local issues.

Investigation

21 | What are the typical steps in an investigation?

In investigations, a distinction has to be made between criminal investigations owing to suspected environmental crimes and investigations as an enforcement measure for environmental compliance. Criminal offences are investigated by prosecutors, whereas authorities are competent for investigations in relation to enforcement and administrative offences. Authority investigations of the industrial operator can be announced or unannounced. Unannounced investigations require an imminent environmental risk or that the purpose of the measure cannot otherwise be achieved.

Basically, in an investigation all measures compatible with the proportionality principle are possible. Depending on the level of suspicion, the intensity of the investigative action can increase. This includes, for example, a request for access to files, commissioning of expert opinions, measurements either carried out by the operator or the authority and site visits. Operators subject to authority investigations have a right to be heard and challenge actions and orders.

Administrative decisions

22 | What is the procedure for making administrative decisions?

Before making administrative decisions (eg, granting an environmental permit for an industrial installation or an infrastructure project) the authority consults with the stakeholders (the applicant, neighbours, environmental or other NGOs and other authorities) and (usually) takes into account the findings and objections. Where a decision only affects the applicant, the applicant must be granted a hearing right in advance. Administrative decisions need to be sufficiently precise, the authority must give reasons for its decision and it must set out the possibilities for legal redress.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

The German environmental laws provide for a variety of remedies for non-compliance, which are generally governed by the principle of proportionality. Before orders are imposed (eg, on industrial operations) a hearing is granted to enable the operator to take action voluntarily. Often, the authorities are open to discussions on how to restore compliance. Whenever this is not the case, the authorities can access business premises, request documents and perform investigations. They may order appropriate measures and enforce them, including a partial or complete shutdown of operations or, in a worst-case scenario, revoke a permit (partially or fully). This instrument is a rarely used last resort to fight non-compliance in an industrial plant.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

As a rule, legal redress is granted against final decisions that are in some way disadvantageous to the addressee or third parties. Interim injunctions may be possible whenever accomplished facts must be ruled out or where an administrative decision is directly enforceable (ie, legal redress does not result in a suspension of the effect of the administrative decision). In these cases, the court weighs the consequences of a suspension of the decision taken with the risk of the applicant not being successful on the basis of a fully fledged legal assessment in the main proceedings. Any evidence can be used by the parties. Under German law, however, the administrative courts investigate the facts ex officio in the main proceeding.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Administrative courts and the European Court of Justice

The majority of environmental legislation in Germany pertains to administrative law. Permits (including the consultation of the stakeholders), orders (eg, to restore compliance in an industrial installation) and other decisions are issued in administrative proceedings by the authorities. As a result, administrative decisions can be challenged before the administrative courts. Administrative courts are also competent for the judicial review of contractual agreements with the authorities. If the interpretation of (directly) applicable EU law is an issue, the higher instances have to submit the questions on the interpretation of EU law to the European Court of Justice (ECJ), which issues a preliminary ruling.

Civil courts

Whenever applicable regulations are governed by civil law the civil courts have jurisdiction. For example, the Environmental Liability Act regulates the civil law liability of operators of certain listed installations for any damage caused by environmental impacts to life, limb or property of private parties up to a maximum amount of €85 million.

Criminal courts

Criminal offences against the environment are dealt with by the criminal courts. Administrative offences (fines) are imposed by the authorities, but can also be subject to judicial review before the criminal courts.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

The powers of the courts depend on whether the authorities' decision was based on discretion either when assessing the facts (prognoses or risk assessments on environmental facts, relations or interconnections) or with regard to the action required or whether the decision is fully controllable. If the authority has discretion, the court may only review whether the authority applied its discretion within the legal limits (no extraneous considerations, compliance with the legal basis, proportionality, etc).

The decision of the administrative courts further depends on the type of action. In the event a decision is challenged the court can suspend or withdraw the unlawful decision. If a permit is applied for and denied the court may not be in apposition to grant the permit, but must require the authority, for example, to issue a new decision based on additional investigations, expert statements or information to be submitted by the applicant.

Interim injunctions may be possible whenever accomplished facts must be ruled out or where an administrative decision is directly enforceable (ie, legal redress does not result in a suspension of the effect of the administrative decision).

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Civil claims

The Act on Environmental Liability provides for civil law claims of private parties in the event certain listed industrial installations cause damage to their life or limb, properties or objects. If the installation was operated in compliance with the relevant environmental provisions, the operator's liability for property damage is excluded for non-substantial damage and it can rebut the assumption of causation of damage by its operations.

Agreements

Contractual agreements are possible between private parties, for example, on the allocation of costs for damage (such as a remediation of soil contamination between the seller and the purchaser of a contaminated site). The authorities are, however, not bound by such agreements between private parties under civil law. Agreements of operators with the authorities are governed by administrative law since they replace the issuance of a unilateral administrative decision by the authority. Here, the operator can agree with the authority on a timetable to implement or restore environmental compliance.

Defences and indemnities

28 | What defences or indemnities are available?

Environmental liability under German law is strict liability (ie, it applies regardless of fault). This means that possible defences are limited, for example, to force majeure, causation by another party, absence of risk for human health or the environment, adequate existing emergency procedures and prevention measures, rapidly implemented remedial or long-term prevention measures. In the case of civil law liability, the offender may argue that it did not act wilfully or negligently.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

Criminal liability

Under German law there is no corporate criminal liability, but only of individuals, when acting for the company. Directors and officers are criminally liable for their own and their employees' actions in the case of specific instructions or if they have assumed responsibility otherwise. A defence would then relate to unforeseeable behaviour beyond instruction, adherence to the conditions of a permit or a compliance system.

Liability for administrative offences

With regard to administrative offences in Germany, the company is primarily liable for environmental offences. Yet, managers may become personally liable if they act wrongfully. They are not only liable for their own infringements but can also be held liable for employees' violations if they have failed to duly supervise them or to establish an appropriate supervision system. Therefore, a possible defence is acting in compliance with the requirements of such a supervision system.

Appeal process

30 | What is the appeal process from trials?

Appeal courts

Whenever the administrative courts are the first instance, there is an appeal instance reviewing the facts (higher administrative courts). The Federal Administrative Supreme Court only reviews and ensures the correct application of the laws. It harmonises interpretation of federal laws with binding effect throughout Germany. It does not, however, interpret state laws. The Federal Constitutional Court reviews compliance of decisions or laws with the Constitution and the fundamental rights.

ECJ

Usually only the higher administrative courts refer questions on the interpretation of EU laws or their German implementation to the European Court of Justice for a preliminary ruling. On the basis of such rulings the national courts decide their cases. Thus, in a matter we advised on, the ECJ opened permits under the Emissions Control Act to judicial review regarding species and habitat protection. As a consequence, the German court had to withdraw the permit for a power plant on the basis of the ECJ's ruling. Further, the Act on Legal Redress by environmental NGOs had to be amended.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

POP Convention

Germany is a signatory to most international environmental treaties and agreements, among them various conventions banning certain substances from the product chains and the market, among them the Stockholm Convention prohibiting persistent organic pollutants (POPs) that are not readily degradable and, thus, build up in human and animal bodies. POPs can, via air, water or the food chain, have toxic effects far from the place where they were released. Further, they may disrupt the reproductive process, give rise to hormonal disorders or cause cancer. POPs are by now broadly eliminated in product chains (eg, in functional clothing, firefighting foams, plasticisers for building materials and plant protection products). The obligations were implemented into German law and are continuously enforced.

Aarhus Convention

The Aarhus Convention gives, as a rule, private parties and NGOs broad access to environmental information, administrative procedures and legal redress. It is implemented into EU law by the Directive on Environmental Impact Assessments and some obligations in the Industrial Emissions Directive, which Germany, in turn, transposed into national law.

Espoo Convention and bilateral agreements

The Espoo Convention regulates the cross-border environmental impact assessment (EIA) procedure (including authority and public participation) in the case of transboundary infrastructure or other projects or national projects with transfrontier impacts. It applies to motor- or railways, electricity networks, gas pipelines and dangerous industrial installations, among others. The Convention is flanked by bilateral agreements such as the German-Polish EIA Agreement or project-related international treaties such as the treaty between Germany and Denmark relating to the Fixed Fehmarnbelt Project.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

Substantial impacts of the Aarhus Convention

The implementation of the Aarhus Convention into EU and national law (inter alia, in the Environmental Information Act, the Act on Environmental Impact Assessment and the Legal Redress Act for environmental NGOs) has substantially changed public participation and legal redress in Germany. By now, environmental NGOs have, for example, successfully challenged denials of access to authority files, infrastructure permits without prior or with a deficient EIA, or permits under the Emissions Control Act without an appropriate assessment of impacts on protected species or habitats under the Natura 2000 regime. Also, where environmental NGOs initially did not have legal redress at all, they broadened their actions rights by invoking non-compliance of the national laws with the Aarhus Convention and EU implementing regulations. Since in many of these cases the European Court of Justice decided on the required interpretation of the national laws (in light of the obligations under the Aarhus Convention and EU law) and found the laws to be deficient, the German legislature had to amend the regulations accordingly.

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

Continued growth and change

Environmental law continues to change and evolve, as new regulations are adopted and existing rules are interpreted, amended or challenged in practice and before the courts. The transition to the closed cycle economy, stricter control of chemical substances, nature protection and decarbonisation of energy generation, industry, traffic and households continues to dominate German environmental efforts.

Air quality

The ongoing infringement procedures against Germany based on violation of EU environmental laws initiated by the European Commission are showing results. In particular, the non-compliance with the EU air quality requirements for particulate matter, NO₂ and CO₂, are reshaping urban traffic owing to bans of older diesel vehicles in bigger cities, have provided the impetus for the shift to electro-mobility and are ultimately transforming the German automotive industry. Further, the German government has agreed on a climate protection package (€54 billion) that provides for a future price on CO₂ emissions for everybody, investments into infrastructure and e-mobility, and numerous incentives for greater energy efficiency and decarbonisation.

Waste management

Photos of plastic bags floating in the oceans and their planned ban for shopping as of 2021 are only symbols for the raising of public awareness for closed cycle management. Yet, in total, waste quantities have increased in such a way that the capacities of waste incineration or energetic recovery from waste are exhausted and waste needs to be held in interim storage. The legislature is increasingly regulating waste streams and obligations to collect waste separately and prioritise substance recovery. Packaging waste is only one further example of extended producer liability, with comprehensive obligations that entered into force in 2019.

Challenges

The possibilities of environmental and other non-governmental NGOs have been and are still being expanded by the courts mainly due to provisions based on the requirements of the Aarhus Convention. As a result, certain infrastructure, energy and industry projects can be successfully challenged or substantially delayed for reasons of nature protection, which is increasingly becoming a problem for urgently needed renewable energy projects and expansion of the railway network.

Coronavirus

34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

In environmental law, planning and permit procedures, as well as inspections, monitoring and expert action, are regularly required. As a result of the covid-19 pandemic, new regulations were required in these areas to ensure continuity with regard to environmental law requirements. Unfortunately, the pandemic also increased the undesired disposal of plastic waste in the wild and, consequently, low recycling rates. As a



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measure to boost more sustainable use and the circular economy in this sector, the EU member states adopted a plastic tax.

Digital Act to Secure Planning Procedures

The legislature and the authorities have adopted all kinds of delays, postponements of deadlines and simplifications and enabled the use of digital solutions in ongoing procedures. In May 2020, the Digital Act to Secure Planning Procedures entered into force. The Act aims to ensure the successful continuation or performance of planning procedures for, among other things, all types of infrastructure, energy or industry projects by providing – for a limited period – digital alternatives for certain procedural steps.

The Act allows digital applications, objections, granting of access to files and notification of decisions. Hearings of the administration or the courts can be carried out as online consultations or by telephone or video conference. The authorities and courts are obliged to provide electronic access. To safeguard business and trade secrets in digital proceedings, the project developers can object to the publication of information via the internet.

The Act applies to ongoing procedures, if the publication and public display ends on 31 March 2021 at the latest. The Act continues to apply for a transitory period until 31 December 2025. It is broadly expected that the Digital Act to Secure Planning procedures is only the first surge in a more far-reaching digitalisation of procedures before authorities and courts.

Delays and simplifications

Examples of delays and simplifications introduced by the authorities by way of decree or administrative provisions are postponements of regular environmental on-site inspections by authorities under the Industrial Emissions Directive or by approved inspection agencies for dangerous installations such as elevators, installations in explosive atmospheres, and storage and tank facilities.

Also, EMAS registrations, product conformity assessments and expert assessments can be delayed, partly upon application. The same applies to notification duties of operators or companies placing products on the market or necessary verification of documentation (eg, on waste disposal).

For a limited period, certain technical norms (eg, relating to protective masks) were provided cost-free to facilitate product compliance by producers and importers at low cost.

Single-use plastic and plastic tax

Another effect of the pandemic is the increased quantities of (single-use) plastic wastes (eg, of foods, packaging, masks and medicines, and in other sectors, partly also for reasons of hygiene). As of 3 July 2021, the EU Single-Use Plastics Directive, which was enacted in 2019, will prohibit the placing on the market of certain single-use plastic products, such as food and beverage containers, plates, straws and cotton buds.

To generate proceeds and to boost legal action, the EU member states agreed on a tax on plastic wastes that are not recycled to be introduced in January 2021. The tax must be paid by the EU member states and amounts to €0.80 per kg of unrecycled plastic waste. For 2021, tax revenues of around €5.7 billion are expected.

Best practices

Given the numerous delays and simplifications, industry clients should have a strict management and monitoring system of duties and deadlines in place. When regulatory normality returns, this will be a safeguard against unwelcome surprises. In parallel, clients should check whether they comply with the preconditions of numerous EU, national, regional and local subsidy programmes that have been set up to cushion some of the effects of the pandemic.

Malta

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LEGISLATION

Main environmental regulations

- 1 | What are the main statutes and regulations relating to the environment?

The main legislation is the Environment Protection Act (EPA) (Chapter 549), with the various aspects of environmental law regulated by the Act's subsidiary legislation (SL).

Integrated pollution prevention and control

- 2 | Is there a system of integrated control of pollution?

The Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (SL549.77) (the IPPC Regulations) aim to prevent, reduce and control pollution from various point sources and to set out principles for the permitting and control of industrial installations based on an integrated approach and the best available techniques (BAT).

The Regulations oblige operators of installations set out in Schedule 1 to obtain permits from the competent authority. Such permits would generally contain, among other details, a description of the installation, materials and energy used and generated, the sources and nature of foreseeable emissions as well as the measures planned to monitor such emissions. When determining whether to grant the permit, the competent authority adopts an 'integrated' approach and considers:

- the whole environmental performance of the installation;
- any potential impacts on human health; and
- the capability and suitability of the applicant to undertake the proposed activity.

To control and minimise pollution from the installation, the permit will establish pollution standards - namely emission limits set by the competent authority on the basis of BAT. The permit would also impose monitoring obligations on the operator, who must provide certain data to the authority, at regular intervals, enabling it to check the operator's compliance with emission levels and other permit conditions. Additionally, where activities involve hazardous substances that may contaminate the soil or groundwater, the operator will be required to prepare a baseline report concerning the status of the soil and groundwater so that if significant pollution occurs over time, the operator would, after cessation of the activity, be obliged to return the site to the state defined in the baseline report.

Soil pollution

- 3 | What are the main characteristics of the rules applicable to soil pollution?

There are no specific rules governing soil pollution. Liability for soil pollution would be governed by general principles of civil law, and by the Prevention and Remedying of Environmental Damage Regulations (SL549.97), which address all types of environmental damage.

Under general civil law principles, liability would be shared between the responsible parties, with each party bearing responsibility for the damage caused by that party's actions. Additionally, where two or more persons cause damage maliciously, those persons shall be jointly and severally liable for the damage.

Liability under the Prevention and Remedying of Environmental Damage Regulations is based on the 'polluter pays' principle. The Regulations apply to two categories of environmental harm:

- damage caused by certain defined occupational activities (eg, operation of a power plant) and to imminent threats of such damage occurring by way of those activities; and
- damage to protected species and habitats caused by any occupational activities, but only where the operator is at fault or negligent.

Regulation of waste

- 4 | What types of waste are regulated and how?

The main legislation governing waste comprises the EPA, the Waste Regulations (SL549.63) and the Waste Management (Activity Registration) Regulations (SL549.45).

The EPA defines 'waste' as 'any thing, substance or object which the holder discards or intends to discard, or is required to keep in order to discard', and requires the competent authorities to ensure that waste is managed in a sustainable manner and that its reduction, proper use, reuse and recovery is promoted.

The Waste Regulations also define 'waste' as 'any substance or object which the holder discards or intends or is required to discard'.

The above definitions illustrate that the term is relatively wide and could give rise to uncertainty as to what waste constitutes exactly. Notwithstanding this, the Waste Regulations specify that by-products, which are substances or objects resulting from production processes, are not regarded as waste, as long as the following conditions are met:

- further use of the substance or object is certain;
- the substance or object can be used directly without any further processing other than normal industrial practice;
- the substance or object is produced as an integral part of a production process; and
- further use is lawful, in other words, the substance or object fulfils all relevant product, environment and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts.

In terms of the EPA, the Minister responsible for the Environment may, with regard to waste management, classify waste and prescribe rules in relation thereto.

The Code of Police Laws (Chapter 10) prohibits all persons from throwing or dumping refuse or rubbish in any place, and from accumulating rubbish and refuse, dirty, polluted or stagnant water, sewage and other foul matter. Any person found guilty of breaching the above will be liable on conviction to a fine.

The remainder of the waste legislation mainly concerns waste management. Under the Waste Regulations (SL549.63), permits from the competent authority are required by any person wishing to carry out any waste management activity, and in some cases by producers of waste intending to store or dispose of, on-site, the waste it produces.

Packaging waste is dealt with in the Waste Management (Packaging and Packaging Waste) Regulations (SL549.43), which oblige producers of packaging waste to collect, recover and recycle such waste.

Electrical and electronic equipment and radioactive waste are also regulated through specific legislation.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

The main environmental legislation regulating air emissions are the IPPC Regulations and the Ambient Air Quality Regulations (SL549.59). These Regulations impose certain obligations on the competent authority with respect to implementation, monitoring and control. More specifically, the authority must, among other things, establish limit values and alert thresholds for ambient air, carry out assessments of ambient air quality, and implement measures in zones where levels are higher than the limit value. Air discharges from industrial activities are also regulated by the permit itself, which will typically contain pollutant specific emission limit values based on the best available techniques.

The energy efficiency of buildings is regulated by the Energy Performance of Buildings Regulations (SL513.01). The Regulations establish a methodology for, among other things, calculating the integrated energy performance of buildings and building units, the issuance of energy certifications and the regular inspection of heating and air-conditioning systems in buildings.

The Industrial Emissions (Large Combustion Plants) Regulations (SL549.78) regulate emissions from large combustion plants. The Regulations provide for the limitation of atmospheric emissions from large combustion plants having a total rated thermal input equal to or greater than 50MWth, irrespective of the type of fuel used.

Energy audits for buildings are contemplated in the Energy Efficiency and Cogeneration Regulations (SL545.16) and the minimum criteria for carrying out such audits are set out in the Fifth Schedule. The Regulations impose obligations on the Minister responsible for Energy to:

- promote the availability of high-quality energy audits to final customers, and for this purpose, the Minister is required to establish transparent and non-discriminatory minimum criteria for such energy audits in accordance with the Regulations;
- encourage small and medium-sized enterprises to undergo energy audits, and the subsequent implementation of the recommendations; and
- raise awareness among households about the benefits of energy audits through appropriate advice services.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

The Water Policy Framework Regulations (SL549.100) establish an action plan for protecting inland waters, coastal waters and groundwater. These regulations attempt to adopt a holistic approach with respect to the entire field of water management. Essentially, the aim is to promote sustainable water use based on long-term protection of available water resources; and to enhance the protection and improvement of the aquatic environment, through specific measures for the progressive reduction and phasing out of discharges, emissions and losses of hazardous substances.

Fresh water specifically is protected under the Protection of Groundwater against Pollution and Deterioration Regulations (SL549.53) and the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations (SL549.10). These Regulations are both preventative and remedial in nature and, essentially, tackle pollution of groundwater both from point as well as diffuse sources as they regulate direct and indirect discharges. Additionally, pollution caused to groundwater by nitrates from agricultural sources is also regulated under Maltese law. Contamination of fresh water sources by any person will give rise to criminal liability.

Extraction, whether for private or public use, is subject to strict controls and permitting requirements by the competent authority. The filling of pools is also regulated and must be done with fresh water to avoid harmful leakage of seawater into the groundwater.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

Over 20 per cent of Malta's land area has protection status under the EU's Birds and Habitats Directives. Moreover, several sites have been designated as special areas of conservation under the Flora, Fauna and Natural Habitats Protection Regulations (SL549.44) and as special protection areas under the Conservation of Wild Birds Regulations (SL549.42). Among these protected sites are the woodlands in Buskett and Comino, which have also been designated by the European Commission as sites of Community importance. These protected areas form part of the coherent European ecological network of special areas of conservation established under Natura 2000. Generally, within these protected areas, no operations or activities may be carried out unless consent has been given by the competent authority; and before granting such consent, the Environment and Resources Authority (ERA) will, where it appears that such activity is likely to have a significant effect on the protected site, carry out, or require the applicant to carry out, an environmental assessment of the implications of the activity on the site.

Additionally, the ERA is empowered, under the EPA, to issue conservation orders to protect areas that are deemed important from a landscape perspective. Once an area is 'protected' for conservation, the ERA may take such measures as it deems necessary to protect the status of the area and prevent any deterioration thereof.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

The overall protection of species is governed by the Flora, Fauna and Natural Habitats Protection Regulations (SL549.44), and the types of protected species are set out in the Second Schedule.

In addressing the protection of species and habitats, the Regulations prohibit persons from, among other things, disturbing,

capturing, killing, destroying, transporting and selling protected species without first obtaining a permit. The Regulations also impose obligations on the competent authority in terms of developing national strategies and other action plans and programmes aimed at the conservation and sustainable use of biodiversity.

Protected species within the Maltese Islands are afforded further protection through the Species Protection (Designation of National Species) Regulations, which provide for the identification, surveillance and monitoring of protected species, and promote their conservation.

Other legislation governing the protection of flora and fauna include the Conservation of Wild Birds Regulations (SL549.42) and the Trees and Woodlands Protection Regulations (SL549.64). In addition, there are various other pieces of legislation under Maltese law regulating the protection of a specific species or a defined protected area.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

Environmental noise is mainly regulated under the Assessment and Management of Environmental Noise Regulations (SL549.37), which define environmental noise as unwanted or harmful outdoor sound created by human activities, including noise emitted by means of transport, road traffic, rail traffic, air traffic, and from sites of industrial activity. The Regulations aim to define a common approach intended to avoid, prevent or reduce, on a prioritised basis, the harmful effects (including annoyance) resulting from exposure to environmental noise. To this end, the Regulations seek to:

- determine the exposure to environmental noise through noise mapping;
- ensure that information on environmental noise and its effects is made available to the public; and
- adopt action plans based upon noise-mapping results, with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and preserving environmental noise quality where it is good.

Implementation of the Regulations is the responsibility of the ERA.

Vibrations are, in effect, regulated under the Industrial Emissions (Framework) Regulations (SL549.76) and are included in the definitions of 'pollution' and 'emissions'; and odours are controlled by the competent authorities through general permitting requirements including trading licences and environmental permits.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

In terms of the EPA, it is the duty of everyone, including the government, to protect the environment and to assist in preventative and remedial measures to ensure its protection. On the government's part, this is primarily done through the issuance of regulations that impose financial penalties, and in certain circumstances imprisonment, on persons acting in contravention of this obligation. For a person to be held responsible for acts harmful to the environment, such person must be in breach of a specific law. Additionally, where a breach occurs, only material (real) damages may be recovered, which may include loss of profits. Moral, psychological and penal damages are not generally permitted.

The EPA gives the Minister responsible for the Environment the necessary power to protect the environment as an entity in itself. It furthermore acknowledges the difficulty in quantifying damages in cases of environmental harm and directs the courts to decide the

quantum according to their best judgement, thereby incorporating the polluter-pays principle.

Additionally, the Prevention and Remedying of Environmental Damage Regulations (SL549.97) establish a framework of environmental liability based on the polluter-pays principle, to prevent and remedy environmental damage. The Regulations apply to environmental damage caused by defined occupational activities (listed in Schedule III) and to imminent threats of such damage occurring by reason of any of those activities. With regard to protected species and habitats, however, the Regulations apply to environmental damage caused by occupational activities where the operator is at fault or negligent.

Environmental taxes

11 | Is there any type of environmental tax?

A tax referred to as 'eco-contribution' is imposed on a producer (manufacturer or importer) for placing certain specified products on the market. The eco-contribution is levied taking into account the end of use of certain products, at which point they become waste and may become harmful to the environment. Through a recent reform of the eco-contribution regime, electronic and white goods have been eliminated from the list of products as these are now fully regulated by the Waste Management (Electrical and Electronic Equipment) Regulations (SL549.89). Other goods such as kitchenware, plastics and mattresses are no longer subject to this tax.

Taxation levied for the registration and circulation of motor vehicles has also taken account of the environmental implications of vehicles, with policies allowing favourable tax rates for lower emission levels having been locally implemented. The rate of registration tax levied varies depending on carbon dioxide emission value and age of the vehicle, among other contributing factors. The Annual Circulation Tax also takes into account the age of the vehicle and specifications such as vehicle weight or engine cubic capacity, depending on the type of vehicle in consideration.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

The main source of legislation concerning hazardous activities is the Control of Major Accident Hazards Regulations (SL424.19) (COMAH), which implements Directive 2012/18/EU (Seveso III). The Regulations concern the use of dangerous substances rather than specific activities, and primarily aim at regulating sites that store, produce or make use of dangerous substances in sufficient quantities and that could constitute a serious health, safety or environmental risk.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

With regard to hazardous products and substances, regulations are aimed at protecting the environment and creating common standards to protect consumers, ensuring the free circulation of goods among member states without damage being caused to the environment or human health. In fact, the Dangerous Substance Regulations (SL427.14) were issued under the Product Safety Act (Chapter 427). The Regulations define substances as chemical elements and their compounds in the natural state or obtained by any production process. Furthermore, the Regulations list a number of substances that are considered to be 'dangerous', such as explosive and extremely and highly flammable substances and preparations. The main obligations on the importer and producer under these Regulations relate to labelling and packaging.

Maltese legislation concerning hazardous products and packages is mainly made up of EU Regulations, namely Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (as amended by Commission Regulation (EU) 2018/1480 for the purpose of its adaptation to technical and scientific progress); and Regulation (EC) No. 1907/2006 on the registration, evaluation, authorisation and restriction of chemicals (REACH). The latter is designed to ensure a high level of protection of human health and the environment from risks that can be posed by chemicals. REACH makes the industry responsible for assessing and managing the risks posed by chemicals and providing appropriate safety information to their users.

Other potentially dangerous and hazardous substances, such as pesticides, explosives and fertilisers, are regulated under Maltese law by subject-specific legislation.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

In 2018, 10 establishments were identified – on the basis of the type and quantity of fuels stored at the facilities – as COMAH establishments in terms of the COMAH Regulations, eight of which are upper-tier sites.

The Regulations place various obligations on the operators of COMAH establishments, such as notifying the competent authority of the presence of dangerous substances and having a major-accident prevention policy in place. Upper-tier establishments have additional obligations, such as preparing a safety report, establishing a safety management system and an emergency plan, and informing persons in the vicinity. The competent authorities also have various obligations directly related to the establishments, such as inspections of the installation and review of the safety report or major accident prevention policy, and obligations relating to emergency planning and land-use planning.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

The main environmental aspect in M&A transactions would be environmental liability. Where a company acquires shares in another company that has committed an environmental wrongdoing prior to the acquisition, the acquiring company (as shareholder) would not, except in very limited circumstances, be liable unless it had also participated in such wrongdoing. The purchaser of the shares does not itself take on the environmental liability of the company.

Consideration should also be given to permitting issues. In a case where a company operates under an environmental permit that risks being revoked by the competent authority owing to non-compliance with environmental regulations, shareholders may not want to acquire shares in such a company. For this reason, investigations and due diligence exercises should always be carried out to ensure that any environmental-related issues are disclosed prior to the acquisition.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

In real estate transactions, issues of possible soil pollution and other environmental considerations would certainly be of interest to a new owner since, although such owner would not be held liable for environmental damage caused prior to the acquisition, the competent

authorities could nevertheless, in certain cases, impound the property. In transactions regarding financing, environmental due diligence will in general be similar to that of an M&A transaction.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

The Public Procurement Regulations (SL601.03) do not formulate any absolute environmental criteria. They do, however, provide that the conditions governing the performance of a contract may concern environmental considerations. The Regulations further provide that contracting authorities are to establish technical specifications for public contracts; such specifications may include environmental characteristics. When laying down such environmental characteristics in terms of performance or functional requirements, contracting authorities may use the detailed specifications or parts thereof as defined by European or national or multinational eco-labels or any other eco-label. The contracting authority may be required by the Director of Contracts to provide information to the tenderer or candidate as to its obligations, including those relating to environmental protection, which shall be applicable to the works or services executed during the performance of the contract.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

The main types of environmental assessment insofar as developments and projects are concerned are the environmental impact assessment (EIA) and the appropriate assessment (AA). These assessments are not licences in themselves, but they do form part of the development permitting process.

Generally, developments falling within the Environmental Impact Assessment Regulations (SL549.46) – typically large-scale projects likely to have significant impact on the environment – require an EIA. Projects of a smaller scale may be subject to an AA if the site of the development falls within, or is relatively close to, a Natura 2000 or other protected site or area, and is likely to have an adverse effect on the protected site.

Additionally, government plans and programmes that are likely to have a significant effect on the environment are subject to a strategic environmental assessment (SEA) in accordance with the Strategic Environmental Assessment Regulations (SL549.61).

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

Before consent is granted for a development, a screening process must take place to determine whether the development qualifies for mandatory assessments, such as the AA and the EIA. If an AA is required, the case is processed either in accordance with the Flora, Fauna and Natural Habitats Protection Regulations (SL549.44), and if an EIA is required, in accordance with the EIA Regulations (SL549.46). It is important to note that these two assessments are not exclusive of one another and in some cases both may be required.

An AA is required where the proposed development is not directly connected with or necessary to the management of the protected site, and where it appears to the ERA that such activity is likely to have a significant effect on the protected site. The information gathered for

this assessment will enable the ERA to make an informed decision as to whether to grant development consent. Developments that are relatively complex will usually require detailed assessments. However, it is possible that even with detailed assessments the impacts remain unclear and therefore cannot be excluded. In this case, a full-blown study, similar to an EIA, would be required. The actual content of the AA will depend on the complexity and nature of the activities to be carried out and the location or site of the activities. At the very least, the assessment will have to include a description of the project and the land and marine environments affected by the activities, the elements of the project that are likely to have environmental impacts, the potential impacts on the habitats and species listed in the Schedules to SL549.44, and mitigation measures. Once the relevant information has been gathered and the report is submitted to the ERA, the adverse effects on the integrity of the site have to be assessed by the authority. If the impact is considered insignificant or likely to be significant or unclear but can be rendered insignificant through mitigation measures, the proposed activity can proceed. If, on the other hand, the mitigation measures are insufficient such that significant impacts would remain, then the proposal may be refused.

With regard to EIAs, all developments listed in Schedule I of the EIA Regulations require either a full EIA or screening in accordance with Schedule III by the ERA, depending on whether they fall within Category I or II. Developments not listed in the Schedule would not require an EIA or screening unless in the opinion of the ERA they are likely to have significant impacts on the environment.

Where the ERA indicates that a project or development falls within Schedule I, the permit application must be accompanied by a project description statement in accordance with Schedule II. This provides the ERA with the necessary information to conduct a screening of the proposed development (not falling in Category I – as the latter automatically require a full EIA) and to decide whether an EIA is required. The decision is communicated to the applicant within 30 calendar days and is made available to the public. Following screening, if a proposed development requires an EIA, project-specific terms of reference (TOR) are formulated by the ERA following a 30-day consultation period with government agencies, NGOs, affected local councils and the public. These TOR will determine the content of the EIA report. An EIA coordinator and independent consultants are then appointed by the developer to conduct the studies required and to assess the likely impacts of the environmental parameters established in the TOR. The EIA findings are compiled into an EIA report. Once the report is complete, the developer must publish a notice in local newspapers, informing the public that an EIA report has been submitted to the ERA and is available for public consultation. A digital copy of the report is made available on the ERA's website for a 30-day consultation period. Concurrently, consultation is undertaken with government entities, local councils and NGOs. For Category I projects (those automatically requiring a full EIA), a public hearing is organised at the cost of the developer within or after the consultation period. All comments, queries and requests made during the consultation period and public hearing are referred to the EIA coordinator, and the EIA report may be revised accordingly. The ERA will examine the final EIA report and prepare its final assessment thereon, which will have a bearing on the decision on whether to approve the development permit. Should it be approved, specific conditions and post-permit monitoring will apply.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

The ERA is the main body responsible for ensuring compliance with environmental legislation. The ERA's primary functions are to:

- formulate and implement policies relating to the protection and management of the environment, and the sustainable management of natural resources;
- permit, assess, investigate, audit, monitor and take action on any activity, intervention, project, operation or land use that may have an effect on the environment; and
- carry out, review or request others to carry out environmental assessments, environmental audits and environmental monitoring of activities and works having an impact on the environment.

The ERA has the power to revoke or modify any authorisation or permit granted where environmental damage or risk is concerned. Additionally, the ERA has the power to carry out investigations and inspections. The ERA may issue stop notices and compliance orders and may impose administrative fines.

Investigation

21 | What are the typical steps in an investigation?

Regulatory authorities may monitor and investigate any issues and complaints brought to their attention. In certain cases, the relevant regulator or competent authority will have the power to take any action it may deem necessary and enforce it in accordance with relevant laws. When an investigation is being carried out, apart from assessing the complaint and the facts of the case, the authorities may also carry out on-site inspections, collect documentation and evidence, carry out inquiries and invite any interested parties to make any submissions. Interim measures may also be evoked to safeguard rights.

Administrative decisions

22 | What is the procedure for making administrative decisions?

Generally, when an administrative decision is to be made, consultation, oral or written, will occur, after which parties are invited to make submissions. Procedures for making such decisions are usually subject to any relevant policies and guidelines that may be issued by authorities.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

Violations may amount to offences, rendering the offender criminally liable. In such cases, offenders may face imprisonment, revocation of a licence or permit, or a fine. Administrative penalties may also be imposed, as well as warnings or substantial fines, as the situation may be.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

Decisions of public authorities are generally subject to appeal. Decisions as to environmental assessments, access to environmental information and the prevention and remedying of environmental damage taken by the ERA, for instance, may be appealed before the Environment and Planning Review Tribunal. From such decisions, further, albeit limited,

recourse may be had to the Court of Appeal (Inferior Jurisdiction). It is also possible to have an administrative action reviewed judicially when claimed to be ultra vires.

Recourse may also be had to the ombudsman; however, this may only result in a recommendation in one's favour.

JUDICIAL PROCEEDINGS

Judicial proceedings

- 25 | Are environmental law proceedings in court civil, criminal or both?

Court proceedings concerning environmental law matters may be civil or criminal, depending on the nature and type of claim.

Powers of courts

- 26 | What are the powers of courts in relation to infringements of environmental law?

At the request of an appellant, which must be made simultaneously with the appeal application, the Environment and Planning Review Tribunal may suspend any development from being carried out pending its decision. Such suspension will be made under terms, conditions and any other measures the Tribunal may deem fit.

The Court, in criminal proceedings, is empowered to order imprisonment or may impose fines and penalties. In civil proceedings, it may award damages or order that any wrongful action be remedied.

Civil claims

- 27 | Are civil claims allowed regarding infringements of environmental law?

Non-contractual claims would generally be brought under the basic principles of tort found in the Civil Code, while contractual claims could be brought on the basis of breach of contract.

Defences and indemnities

- 28 | What defences or indemnities are available?

The general principle at law is that the person liable for any wrongdoing must answer to any damage caused up to that degree. Therefore, all defences provided generally by law shall apply. The 'statute of limitations' in the Civil Code can be used as a defence to an action for damage suffered owing to a wrongful act carried out in relation to the environment. Such a claim would be time-barred after a period of two years, which starts to run from the time the wrongful act is committed. In certain cases, set out in the Civil Code, several and joint liability applies, for instance, where two or more persons, acting maliciously, have caused environmental damage.

Directors' or officers' defences

- 29 | Are there specific defences in the case of directors' or officers' liability?

In cases of civil liability for damage committed by a company or corporate entity, the director or any other officer of the company cannot be held responsible for such damage.

In terms of criminal liability, directors and similar officers may be held personally liable for the offence, however, in such cases, a defence is that the offence was carried out without the director's or officer's knowledge, and that all due diligence had been exercised to prevent the commission of the offence.

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Appeal process

- 30 | What is the appeal process from trials?

Civil actions and criminal offences can be appealed before the relevant court of appeal. The decision of the latter would be final. Where there is a claim for a breach of a constitutional right, the court may refer the matter to the Civil Court, having constitutional jurisdiction, to be decided. An appeal from this decision may be brought before the Constitutional Court.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

- 31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Malta is a signatory to various international environmental treaties, primarily UN conventions, both directly and via the EU. Among the most notable are:

- the International Convention on Civil Liability for Oil Pollution Damage;
- the UN Convention on the Law of the Sea;
- the Convention on the Prevention of Marine Pollution by Dumping of Wastes at Sea and other Matter;
- the Geneva Convention on Long-Range Transboundary Air Pollution;
- the Basel Convention for the Transboundary Movements of Hazardous Wastes and their Disposal;
- the Vienna Convention on the Protection of the Ozone Layer; and
- the Aarhus Convention on Access to Information and Access to Justice in Environmental Matters.

International treaties and regulatory policy

- 32 | To what extent is regulatory policy affected by these treaties?

These conventions influence both Maltese law and policy, so much so that, when ratified, such international treaties or conventions become part of Maltese law.

UPDATE AND TRENDS**Key developments of the past year**

- 33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

The single-use plastics (SUP) strategy is a hot topic. The strategy proposes numerous measures that will lead to a decrease in the consumption of SUP, which will lead to less pollution. Part of the strategy includes the Saving Our Blue campaign, which aims to raise awareness about marine litter and the negative effects of using SUP by educating and engaging citizens, and collaborating with NGOs and the private sector.

Coronavirus

- 34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

There is no covid-19 legislation specific to these topics.

Mexico

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LEGISLATION

Main environmental regulations

- 1 | What are the main statutes and regulations relating to the environment?

The right to a healthy environment is a human right protected under article 4 of the Mexican Federal Constitution (CPEUM); however, this was not the case until 2012. The CPEUM also recognises that environmental damage carries responsibility for the culprit, which one could argue means that the right to demand the remediation of environmental damage is also a human right.

Under this provision, access to clean water for domestic consumption is also established as a human right.

The General Law for Ecological Equilibrium and Environmental Protection (LGEEPA) is the main federal environmental statute. It sets out the principles of Mexican environmental law, public policy instruments and the distribution of powers among the federal, state and municipal authorities. The two most relevant regulations of the LGEEPA are the Regulations on matters of Environmental Impact Evaluation and the Regulations for the Protection and Control of Atmospheric Pollution.

In addition to regulating waste management and disposal, the General Law for the Prevention and Integral Management of Wastes (LGPGR) regulates liability for remediation of contaminated sites, as well as the rules for transferring contaminated sites.

The National Waters Law regulates the use of national waters, wastewater discharges and environmental protection of bodies of water.

The new General Law for Sustainable Forestry Development, enacted on 5 June 2018, recognises landowners as owners of the forestry resources present in their property and regulates exploitation of forestry resources.

Other relevant statutes include the General Law of Climate Change and the Federal Law for Environmental Liability, which establishes a legal action at the federal judicial courts to demand the remediation of environmental damage caused by illegal actions.

Integrated pollution prevention and control

- 2 | Is there a system of integrated control of pollution?

There is no real system of integrated control pollution. In 1997, there was an attempt by the Ministry of Environment and Natural Resources (SEMARNAT) to establish an authorisation that integrated all the federal environmental permits required for a project. The Comprehensive Environmental Licence (LAU) was meant to integrate authorisations on matters of environmental impact, environmental risk, air emissions, hazardous wastes and wastewater discharges. In practice, projects obtain their environmental permits through independent proceedings and the LAU works only as an air emissions licence. Holders of an LAU must, however, annually report the contaminants generated or

discharged to all environmental media through an Annual Emissions Inventory (COA). The COA is also used to report greenhouse gas emissions.

Soil pollution

- 3 | What are the main characteristics of the rules applicable to soil pollution?

Under the LGEEPA and the LGPGIR, the general rule is that the persons responsible for soil pollution are obligated to remediate. Where the guilty party cannot be found, the liability for remediation is charged to the owner or possessor of the contaminated site. An innocent owner or possessor of a contaminated site that has been forced to remediate is entitled to claim the costs from the responsible party through the civil courts.

There are only two Mexican official standards (NOMs) that establish maximum permissible levels of soil contamination: (1) NOM-138-SEMARNAT/SSA1-2012, dealing with hydrocarbons; and (2) NOM-147-SEMARNAT/SSA-2004, relating to heavy metals. Under the LGPGIR, acceptable clean-up levels for contaminants other than hydrocarbons and heavy metals must be set based on a risk assessment. The party responsible for the remediation must conduct a risk assessment to determine acceptable levels of contaminants for the environment and human health on a specific site.

Under civil liability rules, those who handle hazardous materials are obligated to repair the damage caused as a result of accidents or negligence.

Under the Federal Criminal Code, environmental damage caused by a release of hazardous materials by illegal conduct or as a result of failure to apply the adequate preventive measures is considered a crime punishable with imprisonment and penalties.

Regulation of waste

- 4 | What types of waste are regulated and how?

Waste is defined as a material or product in any physical state whose owner or possessor disposes of and that can be subject to valorisation or that must be treated or given final disposal.

The LGPGIR classifies wastes as: (1) hazardous; (2) special management waste; and (3) solid urban waste.

Hazardous wastes have corrosive, reactive, toxic, flammable or explosive characteristics or are infectious and are generally regulated under federal regulations and by the federal authorities. Special management wastes are regulated under state laws and authorities, while solid urban wastes are under the control of the municipalities.

The scope of obligations of waste generators will depend on the annual volume generated; however, in general terms, these are:

- identify and classify the wastes;
- register as a generator with the authority;

- register a waste management plan with SEMARNAT or the competent authority;
- handle the waste in compliance with legal provisions regarding temporary storage, labelling, containers and internal logbooks; and
- retain companies authorised by SEMARNAT or the competent authority for the transportation, treatment and final disposal.

Hazardous waste generators will be responsible from 'cradle to grave', meaning that the generator never stops being liable for the contamination that such waste may cause. Legally, when the generator delivers the waste to an authorised company for treatment or final disposal, such liability will be secondary.

Hazardous wastes from specific industrial sectors, such as mining, and infectious wastes are subject to specific regulations established in the LGPGIR and NOMs. Hazardous wastes from the hydrocarbons sector are regulated by the Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector (ASEA). ASEA has issued specific technical standards and guidelines for the handling of wastes specific to this industry.

Regulation of air emissions

5 What are the main features of the rules governing air emissions?

Air emissions regulations are applicable to both stationary and mobile sources. The federal government has reserved its right to regulate stationary sources belonging to certain sectors or industries. All other stationary sources of emissions and mobile sources will be governed by state authorities.

Stationary sources of air emissions under federal jurisdiction are required to obtain an operating licence or LAU from SEMARNAT. Other obligations include:

- conducting the emissions through chimneys and install control equipment when required to comply with maximum permissible levels of contaminants;
- installing monitoring platforms and sampling ports;
- complying with the maximum permissible levels of contaminants set forth in the applicable NOMs;
- keeping an operations logbook;
- notifying any scheduled shutdowns of operations which may contaminate and doing so immediately when the emissions control equipment fails;
- drafting a contingency plan and participating in those established by the local authorities;
- monitoring the air emissions and reporting the results; and
- filing an annual emissions inventory of air emissions, as well as all other contaminants generated or emitted into any media such as hazardous wastes, wastewater discharges and energy consumption, among other information.

The maximum permissible levels of contaminants are set forth in the NOMs. The two main standards are NOM-085-SEMARNAT-2011, for emissions from the combustion of fossil fuels, and NOM-043-SEMARNAT-1993 for particles. There are other NOMs applicable to contaminants from specific industrial activities, such as volatile organic compounds and sulphur compounds, among others.

SEMARNAT or the competent state authority, as the case may be, have the discretion to impose specific maximum permissible levels of contaminants for specific processes or the obligation to install emissions control equipment in the LAU.

The LAU, however, does not regulate the energy efficiency of buildings.

Protection of fresh water and seawater

6 How are fresh water and seawater, and their associated land, protected?

Surface waters, groundwater and marine waters are owned by the Mexican state and cannot be subject to private ownership. The use of water by public or private persons is only possible through concessions granted by the Federal Executive through the National Water Commission (CONAGUA). The use of sea water requires a concession only for purposes of desalination. Concessions for the use of water can be granted for up to 30 years, renewable, and authorise the use of a specific volume of water for a specific use. The holder of a concession must use the total volume of water authorised by CONAGUA; failure to do so for two consecutive years may result in the partial or total early termination of the concession.

CONAGUA also regulates wastewater discharges into national bodies of water or onto the soil. Wastewater discharges require a permit which must be requested at the same time as the concession for the use of water. The quality of the discharge must comply with maximum permissible levels of contaminants set forth in NOM-001-SEMARNAT-1996. CONAGUA can also impose particular discharge conditions in the permit which may include parameters not regulated in NOM-001 and/or more stringent limits. There are two other NOMs regulating the quality of wastewater: NOM-002-SEMARNAT-1996, for discharges into urban sewerage systems, and NOM-003-SEMARNAT-1997, for the reuse of treated water in certain activities.

The use of the land associated with bodies of water, including riverbeds and their respective federal zones, is also regulated by CONAGUA through concessions. The construction of any works that may affect the hydraulic regime of a body of water requires a permit from CONAGUA. The exploitation of materials found in the riverbed of any national body of water also requires a concession from CONAGUA.

Protection of natural spaces and landscapes

7 What are the main features of the rules protecting natural spaces and landscapes?

Natural spaces and landscapes are areas generally protected through the creation of natural protected areas (NPAs).

NPAs can be terrestrial or marine, representative of a number of ecosystems where 'the original environment has not been significantly altered as a result of human activity, or requires preservation and restoration'. NPAs are aimed at:

- decelerating the rate of loss of diversity and preserving endangered species;
- preserving natural environments that are representative of the different ecological and biogeographic regions;
- securing the sustainable use of natural resources;
- restoring ecosystems that have been significantly modified; and
- protecting the natural surroundings of archaeological and historic zones, and areas that are important for cultural, national and indigenous identity.

NPAs are created by decree issued by the Federal or Local Executive, and published in the Official Gazette of the Federation or the corresponding state. Federal NPA categories are:

- biosphere reserves;
- national parks;
- natural monuments;
- areas for the protection of natural resources;
- areas for the protection of flora and fauna;
- sanctuaries; and
- privately owned land voluntarily designated for conservation.

The protection granted to an NPA consists mainly of restrictions for activities that would be damaging or contrary to the conservation or restoration ends. These restrictions are mandatory even for owners of private property within the NPA, as well as for authorities involved in the granting of permits. Such restrictions are established in the decrees, the LGEEPA and its Regulations on Matters of Natural Protected Areas and the NPA management plan.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

Mexico is a signatory to the Convention on Biological Diversity and the Convention on the International Trade in Endangered Species of Wild Fauna and Flora. The LGEEPA, under its mandate, and the General Wildlife Law establish protective measures for wildlife and endangered species.

The use of natural resources in habitat areas of wildlife as well as the use and exploitation of endemic and endangered species require authorisation by SEMARNAT, which is only granted if it is guaranteed that there will be no alteration to the necessary conditions for the subsistence and development of species, that the controlled reproduction and development of the natural populations of endangered species is guaranteed and that such use will not threaten or jeopardise endemic species. Protected species can be at risk of extinction, threatened or subject to special protection. The species falling within each category are listed in NOM-059-SEMARNAT-2010. Exploitation of certain species is only authorised for investigation or education purposes. International trade of species requires specific approvals from SEMARNAT and illegal trafficking is considered an environmental crime.

Other instruments to guarantee the conservation of flora and fauna include the establishment of closed seasons for hunting or fishing, the voluntary creation of Environmental Management Units and the creation of federal or state NPAs. These restrictions serve to guarantee the preservation, repopulation and redistribution of species by restricting the capture, use and exploitation of specific species for a limited period of time and within a limited area.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

Noise limits are mandatory for stationary and mobile sources, and are established in the following NOMs:

- NOM-082-SEMARNAT-1994: maximum permissible levels of noise emissions for new motorcycles and motorised tricycles in the production facility and the measuring method;
- NOM-079-SEMARNAT-1994: maximum permissible levels of noise emissions for new motor vehicles in the production facility and the measuring method;
- NOM-080-SEMARNAT-1994: maximum permissible levels of noise emissions coming out of the exhaust pipe of circulating motor vehicles, motorcycles and motorised tricycles and the measuring method; and
- NOM-081-SEMARNAT-1994: maximum permissible levels of noise emissions for stationary sources and the measuring method.

Odours and vibrations that can be deleterious or become a nuisance generally forbidden; however, there is no regulation for odours and vibrations under environmental laws, though these may be regulated under labour, health and safety laws.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

The Federal Law on Environmental Liability (LFRA) sets forth a direct and indirect liability framework in order to make reparations and compensation for environmental damage enforceable by judicial means. This law regulates subjective liability for environmental damage resulting from illegal actions.

In general terms, environmental damage is defined as any measurable and adverse loss or deterioration of the environment or its components that was not previously authorised by SEMARNAT. The breach of obligations under environmental permits can also be considered to be an unauthorised environmental impact and, hence, environmental damage.

The LFRA provides the basis for ascertaining environmental damage liability, liable individuals (which may also include a company's managers and executives ordering the damaging activities) and reparation thresholds.

When environmental damage reparations are unfeasible, economic or other in lieu compensation is then due for the liable party. When the damage was caused intentionally, culprit can also be condemned to pay significant economic penalties.

Those provided with legal standing to seek damage redress are the affected communities and civil organisations through a judicial process, which may run in parallel to – and not in exclusion of – the administrative, civil and criminal procedures applicable under governing laws.

Environmental taxes

11 | Is there any type of environmental tax?

The most common environmental taxes are related to the use of natural resources, such as fees for the use of water, wastewater receiving bodies or mining. There is also tax related to the use and production of fossil fuels, which is considered a carbon tax; however, in general, the regulation of environmental taxes is still very underdeveloped in Mexico.

Some states have established environmental taxes for the emission of certain contaminants from specific sources and more recently for the emission of greenhouse gases.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

An activity is considered hazardous or risky depending on the characteristics of the materials involved in the development of the activity and the negative effects that such materials or substances may cause in the environment.

Federal and state jurisdictions regulate hazardous activities based on the principle of reserve of powers by the federation. Activities involving hazardous materials in volumes exceeding the thresholds set forth in the listings published by the federal government will be considered as high-risk and will require an environmental risk assessment and an accident prevention programme, both overseen by the Ministry of Environment and Natural Resources.

On the other hand, each state government, normally through an environmental risk assessment and an accident prevention programme, will regulate activities involving hazardous materials in volumes below the federal thresholds, complying with the particular requirements set forth by each state. Those who develop high-risk activities must acquire environmental liability insurance.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

A material (ie, any element, substance, compound, waste or any mix thereto) will be considered hazardous if its corrosive, reactive, explosive, toxic, flammable or infectious characteristics pose a risk to the environment or human health.

The sale and use of hazardous materials is usually restricted to prior testing and strict regulation 'from farm to fork' (ie, from the production facility, through transportation, storage and selling to final consumers) by the relevant ministry (eg, the Health Ministry for products intended for human use or contact, or the Environment Ministry when they may pose a risk to the environment).

A sanitary registry by the handling facility may be required and insurance is usually mandatory for companies producing, transporting, storing, using or selling hazardous materials. Drafting, delivery and keeping of Material Safety Data Sheets is a requisite for handling each product.

To enforce liability redress or prosecution in case of accidents, improper use, etc, traceability of the material is ensured through the use of mandatory manifests, applicable to each stage of the handling process of the hazardous material.

Hydrocarbons and its derivatives are regulated by the Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector (ASEA), which has issued different industrial safety and environmental protection requirements for the development of activities specifically related to this sector.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

The prevention of industrial accidents is not regulated or overseen by the environmental authorities, but rather by the Ministry of Labour and Social Welfare. From a legal environmental standpoint, the use of hazardous materials requires an accident prevention programme of federal or local jurisdiction – depending on the volume used – which the pertaining authority must approve.

Environmental risk assessments are also mandatory to foresee possible catastrophic events and implement due safeguards to prevent domino effects with other hazardous activities being carried out in the premises or thereabouts. Generally, the environmental authorities establish the obligation to present a copy of the environmental risk study to the municipal authorities so that they can integrate the information in the drafting of urban development plans or programmes.

The creation of intermediate safeguard or buffer zones surrounding a risk activity is provided for in federal and state legislations. However, in practice, this instrument has rarely been used.

Industrial safety in the hydrocarbons is regulated by ASEA, which has issued general administrative provisions that set forth industrial safety and environmental protection requirements applicable to specific activities within the sector.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

Liability for the infringement of environmental laws is generally subjective; therefore, the acquisition of shares in a company also implies the acquisition of all existing and potential environmental contingencies. In

a share deal, it is important to properly identify and assess the existing and potential environmental liabilities to be transferred or acquired, as the case may be, resulting mainly from infringement of environmental regulations, compliance with permits and contamination of the site, or if it will be necessary to incur additional costs to improve infrastructure to comply with existing or future environmental regulations. The accurate identification and assessment of liabilities allows the scope of environmental representations and the disclosure of liabilities by the seller to be assessed accurately, and facilitates a consensus on how to address the issues in the agreement, through escrows, price reductions or other mechanisms. This also permits the inclusion of adequate indemnities.

Under the acquisition of assets, the purchaser does not acquire the company's administrative liability. However, as the new owner of sites, the acquirer will be jointly and severally liable for clean-up or remediation actions in case of contamination of the site. An environmental site assessment study to determine the existence of potential contamination on all facilities to be acquired becomes even more important than in a share deal. The applicable environmental legislation requires the seller to inform the buyer about contamination of the site being transferred and to allocate responsibility for remediation through an authorisation from the Ministry of Environment and Natural Resources before the transfer of the assets is completed. If these obligations are not met, the law determines that the seller will be responsible for the required remediation.

In addition to the aspects identified for a share deal, an asset deal requires an analysis of the assignability of the environmental permits held for the operations of the target company, and if the provision of transitional services by the seller will be required for the continuance of operations of the project or facility.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

The specific environmental aspects relevant to financing transactions should be defined on a case-by-case basis, depending on the type of project to be financed, the structure of the financing and the collateral; however, for all transactions it is always relevant to identify the material environmental risks and to address them adequately in the respective loan agreement, through conditions precedent, covenants or other mechanisms. In project finance deals, it is particularly relevant to confirm that all the relevant environmental permits required for the construction and operation of the project have been obtained or will be able to be obtained so that the project can be completed in a timely manner. Also, if the collateral is to be real estate or an industrial facility, it is important to determine the liabilities that the lender could potentially acquire upon the need to execute such guarantees. Review of existing or potential legal actions by community members against the environmental permits of the project being financed is extremely relevant, particularly when dealing with legal actions that may halt the development of the project.

When dealing with IPO deals, the focus is on identifying and disclosing those risks associated with the environmental aspects of the business (not merely one project or facility) with respect to the material implications or risks derived from the application of the environmental legislation or any breach of compliance with such environmental legislation, as long as the potential consequences are material to the business.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

Environmental protection is taken into consideration by public procurement regulations. At a federal level, for example, there are guidelines that allow contracting entities to develop evaluation criteria in order to adjudicate contracts to bidders that include certain environmental commitments in the execution of the project or contract being awarded. Further, in some instances, both local and federal, contracting entities include environmental commitments in adjudicated agreements that are in addition to the scope of the contract.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

The Mexican Federal Constitution provides concurrent faculties for the federation, states and municipalities on environmental impact matters, and these are allocated by the General Law for Ecological Equilibrium and Environmental Protection by reserving certain works and activities to federal jurisdiction. Those areas not specifically reserved to the federal environmental authorities will be under state or municipal jurisdiction.

Any work or activity that may modify the environment or have negative effects on ecosystems or natural resources must be assessed and approved for its environmental impact by the environmental authorities. Typically, this general rule is specifically defined through catalogues of works and activities that must obtain an environmental impact authorisation.

Activities under federal jurisdiction that require an environmental impact authorisation include:

- hydraulic infrastructure, highways and railroads;
- activities in the oil, gas, electricity, mining, paper, sugar and cement production industries;
- removal of forestry vegetation and commercial exploitation of forestry resources;
- development of industrial parks with high-risk activities and real estate developments affecting coastal ecosystems; and
- works and activities in wetlands, mangroves, lakes, lagoons and natural protected areas.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

The process is as follows:

- the petitioner files the environmental impact assessment (EIS) for evaluation;
- within five business days of the filing of the application, the petitioner must publish an abstract of the project in a newspaper with wide circulation in the relevant state; additionally, the Ministry of Environment and Natural Resources or the Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector, as applicable, will publish the EIS on the electronic Ecological Gazette to be consulted by any person;
- the EIS file must be integrated within 10 business days of the filing;
- within 10 business days of the integration of the file, the authority will notify the relevant state and municipal governments that the EIS was filed for them to make any comments during the evaluation process;

- any citizen, within 10 days of the publication of the abstract of the project in the local newspaper, may request the authority to make the EIS available for consultation in the relevant state;
- in the case of works or activities that may generate material ecological imbalances or damage to public health or ecosystems, the authority, in coordination with the local authorities, may organise a public meeting in which the petitioner will inform and explain the technical environmental aspects of the relevant project;
- any interested party will have 20 days from the moment when the EIS was made available to propose the inclusion of additional prevention and mitigation measures and make observations;
- within 40 business days of the integration of the file, the authority may require clarifications, modifications or additional information, in which case the period of 60 business days (see below) will be suspended; and
- one of the following resolutions must be issued within 60 business days of the integration of the file: rejecting the authorisation, granting the EIA subject to the compliance of certain conditions or authorising the development of the works or activities. This period can be extended for another 60 business days if the project is very complex.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

SEMARNAT

The Ministry of Environment and Natural Resources (SEMARNAT) is the federal governmental agency responsible for dictating the country's environmental policy and the main regulatory agency. Its main goal is to protect, maintain and restore the ecosystems and natural resources in order to promote their use and sustainable development. SEMARNAT works in four main areas:

- the conservation and sustainable use of the ecosystem and its biodiversity;
- prevention, reduction and control of the generation of wastes and polluting emissions that affect the soil, water and air;
- integral management of water resources; and
- climate change.

SEMARNAT has the authority to grant permits on environmental matters for activities under federal jurisdiction.

ASEA

The Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector (ASEA) is a regulatory agency of SEMARNAT created in 2015 as a result of the opening of the hydrocarbon sector to private entities. It is responsible for regulating and supervising industrial and operating safety and environmental protection for activities in the hydrocarbon sector. ASEA has the authority to grant permits on environmental matters related to activities within the hydrocarbon sector and also acts as the enforcement agency.

PROFEPA

The Federal Environmental Enforcement Agency has powers to inspect, enforce and prosecute offenders that do not comply with environmental legislation and to impose penalties, and safety and corrective measures for infringements of environmental law that are not related to the hydrocarbon sector.

CONAGUA

Affiliated with SEMARNAT, with economic and technical autonomy and its own budget. The Federal Executive through the National Water Commission (CONAGUA) is responsible for the management of national waters, prevention and control of water pollution and the protection of national bodies of water and its protection areas. It has powers to grant concessions for the use of national waters, wastewater discharge permits and other permits related to the use of bodies of water and exploitation of materials found in riverbeds. CONAGUA can also impose penalties resulting from breaches to the National Waters Law and acts as the revenue agency for taxes related to the use of national waters.

Investigation

21 | What are the typical steps in an investigation?

Environmental enforcement authorities have the right to conduct inspection visits in order to supervise the compliance of the applicable environmental legislation.

Investigations must comply with due process regulations and are regulated in the General Law for Ecological Equilibrium and Environmental Protection (LGEEPA) and the Federal Law for Administrative Proceedings. Each state has its own proceedings; however, they will generally follow the structure of federal proceedings, as follows.

- The enforcement agency must issue an order of inspection addressed to a specific person or with respect to a specific location, in which it must specify the purpose of the visit.
- The inspection visit is conducted by authorised personnel. The officers assigned to the investigation, prior to initiating the inspection, must identify themselves to the inspected party, showing an ID issued by the relevant governmental authority and delivering a copy of the inspection order.
- An audit report is issued to record all observations occurring during the visit, signed by the supervisor, the inspected party and two witnesses. The inspected party has the right to make observations and offer evidence during the visit and within five business days from the issuance of the audit report.
- During the inspection, the inspectors may order safety interim measures when they detect activities that represent a grave risk to the environment or public health. These measures may include the suspension of activities, closure or seizure of hazardous materials or species of flora or fauna.
- After the inspection, the authority will analyse the observations and determine potential irregularities, in which case it can initiate a formal administrative proceeding aimed at proving the irregularities or imposing penalties.

Administrative decisions

22 | What is the procedure for making administrative decisions?

The procedure is as follows.

- The supervisor will deliver the audit report to the relevant governmental authority, which will request the inspected party to immediately implement the corrective or urgent measures that are necessary to comply with the environmental legislation and permits.
- Upon the existence of irregularities, the authority will initiate a formal administrative proceeding against the inspected party, granting 15 business days to file arguments and documentary evidence in connection with the alleged irregularities.
- After the documentary evidence is filed and analysed by the authority, the inspected party will be granted a period of three business days to file the closing arguments.

- The governmental authority must issue the resolution, imposing penalties if applicable, within 20 business days of the filing of the allegations.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

The LGEEPA establishes a generic catalogue of administrative sanctions, which are not individualised to specific conducts but simply refers to the breach of the law or breach of the terms and conditions set forth in the environmental permits and authorisations. These sanctions can be divided into two groups: the first group considers economic penalties, and the second group considers material effects such as the revocation, suspension and closure of activities. These material sanctions can only be imposed if the works or activities are causing environmental damage that was not considered and evaluated under an environmental impact authorisation or if a potential risk of causing environmental damage exists.

Environmental authorities can also order safety measures, which include the temporary, total or partial closure or suspension of activities, seizing hazardous material or specimens of flora and fauna aimed at preventing or stopping environmental damage or contamination with serious implications. Additionally, authorities can order urgent corrective measures, which can include anything from obtaining pending permits to rebuilding components whose conditions pose a risk to the environment.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

Final resolutions from administrative authorities that affect rights or impose obligations can be challenged. The grounds for challenging resolutions are usually related to legality issues, including the breach of due process rules, lack of or deficient legal motivation and mistakes in portraying the facts, among others.

The party affected may choose to challenge by means of an administrative appeal or through a nullity trial.

Administrative appeal

The affected party has a term of 15 business days from the delivery of the resolution to file the appeal, which will be resolved by the same agency, but by the superior of the government official that issued the resolution. Resolutions issued under this appeal can be further challenged by means of a nullity trial.

Nullity trial

The affected party has a term of 30 business days from the delivery of the resolution to file the nullity claim, which is resolved by the Federal Tribunal for Administrative Justice.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Environmental law proceedings involving resolutions that impose penalties are typically held at administrative courts. The main federal administrative tribunal is the Federal Tribunal for Administrative Justice, which has a specialised chamber for environmental matters; however, definitive rulings from administrative tribunals can be challenged in the judiciary.

The General Law for Ecological Equilibrium and Environmental Protection gives members of a community, the right to challenge the validity of authorisations granted under any federal environmental law on the basis that such an authorisation violates environmental legal provisions. These types of proceedings are tried at the Federal Tribunal for Administrative Justice.

Violations to the constitutional right to a healthy environment can be filed in an *amparo*, which is a constitutional appeal that is tried before the federal courts of the judiciary.

Proceedings aimed at claiming reparation for environmental damage under the Federal Law for Environmental Liability are attended to by the federal district courts. These types of legal actions can only be initiated by the local or federal environmental enforcement agencies or by non-governmental organisations whose purpose is the protection of the environment.

Environmental crimes are initially known by a prosecutor (*Ministerio Público*) who is an administrative authority and has the power to decide whether to initiate a process to pursue an environmental crime. If the prosecutor decides to go ahead with the process, it will be tried before a criminal judge belonging to the judiciary.

Finally, civil liability is not regulated under environmental laws but under the civil codes, and therefore claims for civil liability related to environmental damage will be known by ordinary civil courts, also belonging to the judiciary.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

Administrative environmental enforcement agencies, the Federal Tribunal for Administrative Justice and the federal courts have powers to order precautionary measures aimed mainly at avoiding or limiting actual or potential environmental damage and protecting public health.

Environmental enforcement agencies can impose the temporary or partial closure of a facility or the suspension of any activities when such activities poses a risk to environment. These authorities can also seize species of flora or fauna or forestry material obtained by its possessor illegally or that are held under circumstances that endanger its health or safety.

At any time during proceedings related to the infringement of environmental laws, the courts can order provisional measures aimed at protecting the environment, such as:

- an order to cease or take any action or activity to prevent irreparable harm;
- seizure of any goods or documents related to the environmental damage;
- taking of samples of substances, materials, pollutants and other natural elements related to the environmental damage;
- ordering the environmental authorities to impose immediate precautionary or corrective measures; and
- any other measure necessary to prevent further damage.

Interim measures may also be intended to maintain the existing circumstances to protect the subject matter of the proceeding.

When an interim measure results in losses for or damage to the affected party, the court may request the plaintiff to post a guarantee for those eventual losses; however, this is at the discretion of the judge.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Environmental law recognises that civil liability for damage caused to the environment, property or persons is independent of the administrative or criminal liability resulting from the infringement of environmental laws. Therefore, civil claims are not based on the infringement of an environmental law, but rather on personal or property damage caused by a third party through fault or negligence or as a result of strict liability.

Civil claims may be contractual or non-contractual. Non-contractual civil liability can be strict for damage resulting from the development of legal activities that are inherently risky or hazardous (eg, handling chemicals or hydrocarbons).

Environmental laws also recognise the right of innocent parties to claim civil damages caused by the infringement of environmental law. Therefore, contractually, the parties can agree to indemnify each other for damage caused for such reasons.

Defences and indemnities

28 | What defences or indemnities are available?

Mexican environmental law is based on the 'polluter pays' principle; therefore, administrative liability resulting from the breach of environmental law will always be subjective. This type of liability, consisting mainly of economic penalties, has a five-year statute of limitation.

On the other hand, those who generate hazardous wastes are liable for damage or contamination caused by such waste, even after final disposal; however, the law recognises that once the hazardous wastes are delivered to an authorised company, such liability will be secondary. A generator that suffers damage as a result of the inadequate handling of hazardous wastes by a services company could seek to be indemnified by the latter.

The LGEEPA establishes joint and several liability between the owner and possessor of a site contaminated with hazardous materials or wastes. This liability results in an obligation to remediate, even if the contamination was caused by a third party. For these cases, the law recognises the right of an innocent buyer or possessor to claim damages from the culprit. The General Law for the Prevention and Integral Management of Wastes establishes certain obligations applicable to the transmission of contaminates sites. Failure to comply with these obligations means that the seller will be liable for the remediation as a matter of law. The obligation to remediate does not have a statute of limitation.

Joint and several liability is also established in the National Waters Law (LAN) between those who generate wastewater and the provider of wastewater treatment services. The LAN does not recognise the right of an innocent party to claim damages, and therefore indemnities would need to be addressed contractually.

Under the Federal Law for Environmental Liability, responsibility for environmental damage is subjective and thus arises from illicit acts or omissions. The statute of limitation to claim the reparation of environmental damage is 12 years.

Strict environmental liability arises when damage to the environment is caused directly or indirectly through: the use of hazardous waste or materials; the use and operation of vessels on coral reefs; the performance of high-risk activities; and the handling of inherently dangerous instruments.

Entities are liable for environmental damage caused by their representatives, directors, managers, operators, employees and operators when acting on behalf or for the benefit of such entities.

Entities and third parties hired by the former are jointly liable for the damage caused by the latter.

If two or more persons or entities cause environmental damage with malice or wilful intent, they will be jointly liable unless it is possible to determine the specific damage caused by each party.

Joint liability in these cases can be released if the entity proves to have:

- internal organs dedicated to verifying environmental compliance;
- clean industry certifications by the authorities; and
- secured financial guarantees (environmental insurance).

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

Directors or officers of a corporation cannot be made personally liable for the infringement of environmental law. In such cases, the corporation or entity will be the only person responsible for any penalties that may be imposed by administrative authorities.

Under the Federal Law for Environmental Liability, officers or directors, as well as any individual with the legal duty of preventing environmental damage, will be liable for the reparation of such damage if they failed to prevent it. This law does not provide for specific defences for officers' liability, and therefore they would have to prove during the process that they were not personally responsible for the damage or that they did not have the legal duty to prevent it.

Appeal process

30 | What is the appeal process from trials?

Courts are organised at federal and state levels. At both levels, the Mexican civil court system is based on a hierarchy structure as follows:

- the first instance in charge of a single judge; and
- the second instance in charge of a collegium of three magistrates at the state level and only one magistrate at the federal level.

A decision issued by the first instance justice may be appealed at the second instance level.

All the rulings issued by the federal and state second instance courts can be challenged on human rights and constitutional grounds through a remedy called *amparo*.

Definitive rulings from the Federal Tribunal for Administrative Justice can only be challenged through an *amparo directo*. The plaintiff does not have another level of appeal against the resolution of the *amparo* unless the subject matter is relevant, transcendental and related to the constitutionality of certain laws, in which case an extraordinary revision appeal with the Supreme Court of Justice may be filed in a very few exceptional cases.

Rulings from *amparos* tried against environmental laws or resolutions from environmental authorities (different from the Tribunal), may be challenged through an indirect *amparo*. This resolution can be appealed through a revision recourse.

Resolutions requiring the reparation of environmental damage under the Federal Law for Environmental Liability can be challenged by means of an appeal as a first level of appeal and through an *amparo* as a second level of appeal.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Mexico is a contracting party to many international environmental treaties, including:

- the UN Framework Convention on Climate Change;
- the Kyoto Protocol and the Paris Agreement;
- the Convention on International Trade of Endangered Species of Wild Fauna and Flora;
- the Protocol of 1976 to amend the International Convention on Civil Liability for Oil Pollution Damage of 29 November 1969;
- the Vienna Convention for the Protection of the Ozone Layer;
- the Montreal Protocol on Substances that Deplete the Ozone Layer;
- the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;
- the convention on Biological Diversity;
- the Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage of 29 November 1969;
- the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade;
- the Cartagena Protocol on Biosafety to the Convention on Biological Diversity;
- the Stockholm Convention on Persistent Organic Pollutants;
- the Nagoya Protocol on Access to Genetic Resources and the Fair Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity; and
- the Environmental Cooperation Agreement between Mexico, the United States and Canada, which became effective in July 2020.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

International treaties – which are binding at the international level only on countries – considerably inform Mexican domestic legislation, which then becomes applicable and mandatory to individuals.

Many law enactments and amendments to Mexican environmental legislation come when the Mexican Senate ratifies the international treaties executed by the diplomatic arm of the Mexican State.

For example, on 13 July 2018, the General Climate Change Law was amended to enforce the GHG emissions reduction commitments acquired by Mexico upon the signing of the Paris Accord.

International agreements are hierarchically equal to the Federal Constitution and therefore, federal laws are often the instrument used to implement obligations acquired under international agreements. A clear example is the enacting of the General Climate Change Law, which expressly addresses obligations acquired under the United Nations Framework Convention on Climate Change and the Paris Agreement.

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

Mexico City and approximately 28 other states have banned or restricted the use of plastic bags and single-use plastics. In December 2019, the Senate, the private sector and the federal government signed the National Agreement for a New Plastics Economy as a non-binding commitment to transition to a circular economy. As a result, the Senate

has presented an initiative to enact a General Law on Circular Economy with the intention of reducing industrial waste by 80 to 90 per cent and eliminating the use of unnecessary plastics by 2030. This initiative is controversial and the private sector has proposed a different approach consisting of amending the existing Waste Law and focusing on plastics first, then a transition to a circular economy. It is not clear at this point if the aforementioned law will be passed or not.

However, there are currently two different initiatives under discussion in Congress for a new General Waters Law. It is too early to determine if one of the initiatives will actually become law, but both include changes that could have a significant impact on businesses.

Coronavirus

34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

The most significant emergency legislation has related to protocols and new rules for resuming operations and activities. The federal government has transferred the powers to decide which activities may resume on a weekly basis based on a 'traffic light' system, whose colours depend several factors but mostly relate to hospital occupation.

The protocols to return to activities are mostly related to health and labour issues, not specifically environmental; however, they do establish obligations to retain authorised infectious wastes management services (even for office buildings) to collect infectious or potentially infectious wastes, including face masks and used tissues.

Clients should be aware of the rules for protecting workers that have been established by the federal health and labour authorities, but also by the local governments where they have facilities or offices. These rules change frequently and it is important to stay updated.

In addition, although federal environmental agencies generally remain closed and legal terms continue to be suspended, the Ministry of Environment and Natural Resources, the Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector and the Federal Executive through the National Water Commission are publishing resolutions allowing for specific types of permits or reporting obligations, and others are available through the electronic systems of each agency. It is important to check which proceedings remain open to avoid breaches of environmental reporting obligations or to request an extension of validity terms.

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LEGISLATION

Main environmental regulations

- 1 | What are the main statutes and regulations relating to the environment?

The main piece of legislation relating to the environment is article 66 of the Portuguese Constitution, which sets out the right to a healthy and ecologically sustainable environment, as well as the duty to preserve it.

The Portuguese state has enacted several statutes concerning general environmental matters, notably the following:

- the Environmental Policy Basis Law: Law No. 19/2014 of 14 April;
- the Water Law: Law No. 58/2005 of 29 December (as amended by Decree-Law No. 245/2009 of 22 September, Decree-Law No. 60/2012 of 14 March, Decree-Law No. 130/2012 of 22 June, Law No. 42/2016 of 28 December, and Law No. 44/2017 of 19 June);
- the Law of Integrated Prevention and Control of Pollution and Emissions: Decree-Law No. 127/2013 of August 30;
- the Environmental Liability Law: Decree-Law No. 147/2008 of 29 July (as amended by Decree-Law No. 245/2009 of 22 September, Decree-Law No. 29 A/2011 of 1 March, Decree-Law No. 60/2012 of 14 March, and Decree-Law No. 13/2016 of 9 March);
- the Legal Framework of Environmental Administrative Offences: Law No. 50/2006 of 29 August (as amended by Law No. 89/2009 of 31 August, Law No. 144/2015 of 28 August, and Decree-Law No. 42-A/2016 of 12 August);
- the Environmental Information Law: Law No. 26/2016 of 22 August;
- the Legal Regime of Environmental Impact Assessment: Decree-Law No. 151-B/2013 of 31 October (as amended by Decree-Law No. 47/2014 of 24 March, Decree-Law No. 179/2015 of 27 August, Law No. 37/2017 of 2 June, Decree-Law No. 152-B/2017 of 11 December and Law No. 71/2018 of 31 December);
- the Legal Regime of Single Environmental Licensing: Decree-Law No. 75/2015 of 11 May;
- the Legal Regime of Hazardous Products and Substances: Decree-Law No. 150/2015 of 5 August (as amended by Decree-Law No. 71/2018 of 31 December);
- the Legal Regime of the Preservation of Natural Landscapes and Wild Flora and Fauna: Decree-Law No. 140/99 of 24 April (as amended by Decree-Law No. 49/2005 of 24 February and Decree-Law No. 156-A/2013 of 8 November);
- the Legal Regime of Nature and Biodiversity Preservation: Decree-Law No. 142/2008 of 24 July (as amended by Decree-Law No. 242/2015 of 15 October and Decree-Law No. 42-A/2016 of 12 August);
- the Legal Regime of the National Ecological Reserve: Decree-Law No. 166/2008 of 22 August (as amended by Decree-Law No. 239/2012 of 11 February, Decree-Law No. 96/2013 of 19 July and Decree-Law 80/2015 of 14 May);

- the Legal Regime of the National Agricultural Reserve: Decree-Law No. 73/2009 of 31 March (as amended by Decree-Law No. 199/2015 of 16 September); and
- Decree-Law No. 42 A/2016 of 12 August, which created the Portuguese Environmental Fund.

Water resources legal framework

- The Law of Water Resources: Decree-Law No. 236/98 of 1 August (as amended by Decree-Law No. 52/99 of 20 February, Decree-Law No. 53/99 of 20 February, Decree-Law No. 54/99 of 20 February, Decree-Law No. 56/99 of 26 February, Decree-Law No. 431/99 of 22 October, Decree-Law No. 243/2001 of 5 September, Decree-Law No. 135/2009 of 3 June, Decree-Law No. 103/2010 of 24 September, and Decree-Law No. 83/2011 of 20 June);
- the Human Consumption Water Quality Law: Decree-Law No. 306/2007 of 27 August (as amended by Decree-Law No. 92/2010 of 26 July and Decree-Law No. 152/2017 of 7 December);
- the Law of Water Resources Use: Decree-Law No. 226-A/2007 of 31 May (as amended by Decree-Law No. 391-A/2007 of 21 December, Decree-Law No. 93/2008 of 4 June, Decree-Law No. 107/2009 of 15 May, Decree-Law No. 137/2009 of 8 June, Decree-Law No. 245/2009 of 22 September, Decree-Law No. 82/2010 of 2 July, Decree-Law No. 44/2012 of 29 August, Law No. 12/2018 of 2 March and Decree-Law No. 97/2018); and
- the Law of Urban Wastewater Treatment: Decree-Law No. 152/97 of 19 June (as amended by Decree-Law No. 236/98 of 1 August, Decree-Law No. 348/98 of 9 November, Decree-Law No. 261/99 of 7 July, Decree-Law No. 172/2001 of 26 May, Decree-Law No. 149/2004 of 22 June, Decree-Law No. 198/2008 of 8 October, Decree-Law No. 73/2011 of 17 June, and Decree-Law No. 133/2015 of 13 July).

Waste management legal framework

- The Legal Framework of Waste Management: Decree-Law No. 178/2006 of 5 September (as amended by Decree-Law No. 173/2008 of 26 August, Law No. 64-A/2008 of 31 December, Decree-Law No. 183/2009 of 10 August, Decree-Law No. 73/2011 of 17 June, Decree-Law No. 127/2013 of August 30, Decree-Law 103/2015 of 15 June, Law 82-D/2014 of 31 December, Law 7-A/2016 of 30 March, Decree-Law 75/2015 of 11 May, Decree-Law 71/2016 of 4 November, and Decree-Law No. 152-D/2017 of 11 December);
- the Legal Framework of Specific Waste Stream Systems: Decree-Law No. 152-D/2017 of 11 December (as amended by Law No. 69/2018 of 26 December and Law No. 41/2019 of 21 June);
- the European List of Waste: Commission Decision 2000/532/EC of 3 May (as amended by Commission Decision 2014/955/EU of 18 December); and
- the Law of Organised Waste Market: Decree-Law No. 210/2009 of 3 September (as amended by Decree-Law No. 73/2011 of 17 June).

Air quality management policies on air emissions legal framework and guidelines

- The Law of Evaluation and Management of Air Quality: Decree-Law No. 102/2010 of 23 September (as amended by Decree-Law No. 43/2015 of 27 March, and Decree-Law No. 47/2017 of 10 May);
- the Law of Air Pollution Prevention: Decree-Law No. 39/2018 of 11 June;
- the Law of Greenhouse Licences' Trade Market: Decree-Law No. 12/2020, of 6 April;
- the Law of Substances that Deplete the Ozone Layer: Decree-Law No. 152/2005 of 31 August (as amended by Decree-Law No. 35/2008 of 27 February, Decree-Law No. 85/2014 of May 27, and Decree-Law No. 145/2017 of 30 November); and
- the Regulation on substances that deplete the ozone layer: Regulation (EC) No. 1005/2009 of the European Parliament and of the Council of 16 September (as amended by Regulation (EU) No. 2017/605 of 29 March) and Regulation (EU) No. 389/2013 of the European Commission of 2 May.

Regulations on noise and evaluation and control of environmental noise

- The General Regulation of Noise: Decree-Law No. 9/2007 of 17 January (as amended by Decree-Law No. 278/2007 of 1 August); and
- the Law of Noise Assessment and Management: Decree-Law No. 146/2006 of 31 July.

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

Yes. The Law of Integrated Prevention and Control of Pollution and Emissions sets forth an overall approach to emissions to air, water, soil, waste production and noise, and is applicable to several types of industrial facilities in potential polluting sectors (eg, energy, processing of metals, chemical, waste management).

Under this statute, the start-up of the use of these facilities and any substantial changes made to it are subject to an environmental licence. This licence is part of the facility licence and incorporates the most relevant environmental authorisations or licences and administrative stages in a single integrated licence.

The licence contains measures for the facility to comply with to avoid or reduce pollution, such as limits to emissions and communication obligations to the regulating authority.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

Under article 10 of the Environmental Policy Basis Law, the management of soil requires the implementation of measures that limit or reduce the impact of human activity on soil, that prevent contamination and degradation and that promote its restoration, as well as stopping desertification.

This piece of legislation also sets out a general principle under which anyone who causes environmental damage must restore the status quo ante, and this principle is found in several regulations regarding the environment (in particular, the Legal Framework of Environmental Administrative Offences, the Environmental Liability Law, and the Legal Framework of Waste Management).

Hence, operators that damage soil must take up measures to repair them, namely to prevent, eliminate, control, contain or reduce soil contamination. Under the Legal Framework of Waste Management, possessors and non-possessor legal owners of polluted soil are responsible at a secondary level.

Soil decontamination activities are subject to licensing under the Legal Framework of Waste Management.

Regulation of waste

4 | What types of waste are regulated and how?

According to the Legal Framework of Waste Management, 'waste' is defined as any substance or object that its owner gets rid of or has the intention or obligation of doing so. All substances and objects listed in the European List of Waste implemented by the European Community are also considered 'waste'.

In general, the waste producer is responsible for managing it. There are, however, some exceptions:

- municipal administrative entities are responsible for the management of urban waste below 1,100 litres per day per producer;
- the holder of the waste is responsible for its management whenever it is not possible to determine the producer's identity; and
- when waste is of foreign origin, the management obligation lies with the entity responsible for its introduction in Portugal, except when specifically set forth in the legislation on transfer of waste.

The responsibility of the aforementioned entities to manage the waste ceases when the waste is transferred to a licensed waste treatment operator or to a licensed manager of specific waste stream systems.

Waste treatment activities (which includes the activities of recovery and disposal of waste) are subject to a licensing procedure and other waste management activities, such as storage, sorting and storage and recovery in the place of production, are subject to a simplified licensing procedure.

In general, the collection and transport of waste must be registered with the integrated system for electronic waste registry (SIRER) of the relevant waste management authority in Portugal. Furthermore, registration with SIRER is mandatory in the following situations:

- establishments with more than 10 employees that produce non-urban waste;
- production of hazardous waste;
- professional waste treatment activities;
- entities that manage systems of urban waste;
- the entities that manage individual or integrated systems of specific waste streams;
- waste market participants (eg, brokers, dealers); and
- producers of products that require registry under the terms of the legislation on specific waste streams.

Certain types of waste are subject to specific rules, notably to the Legal Framework of Specific Waste Stream Systems. This is the case, among others, for waste packages, used tyres, construction and demolition waste, used oil, in feed, batteries, accumulators and end-of-life vehicles. In this case, one of the following management models may apply:

- a technical-economic model based on the principle of extended producer responsibility through the implementation of individual systems or of integrated management systems; or
- a model under which the management responsibility lies in the waste producer or holder.

The properties of waste that render it hazardous are set out in Commission Regulation (EU) No. 1357/2014 of 18 December and the list of hazardous waste is listed as such in the European Waste List. The production, collection, transport, storage and treatment of hazardous waste is subject to special conditions.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

Without prejudice to the Law of Integrated Prevention and Control of Pollution and Emissions applying to the facilities covered therein, the Law of Air Pollution Prevention applies to sources of significant air pollution, notably facilities associated with industrial activities, combustion plants with a nominal thermal power equal to or above 1MW and below 50MW, facilities that burn fuel for the generation of energy within oil and gas refineries, and furnaces with thermal power equal to or above 1MW and below 50MW.

Under the Law of Air Pollution Prevention, these facilities must hold an Air Emissions Title and the operator of these facilities must, among others, ensure compliance with the emissions limit value, ensure the monitoring of air emissions and communicate the respective results to the competent authorities, comply with the applicable requisites for the discharge of air pollutants, and notify the competent regional development coordination commission of poor functioning or breakdown of the gaseous effluent treatment system.

In addition, the Law of Evaluation and Management of Air Quality sets out measures intended for determining milestones regarding the quality of ambient air, evaluating the quality of ambient air in Portugal, obtaining information on the quality of ambient air and disclosing it to the public, preserving and improving the ambient air quality and promoting cooperation between EU member states to reduce atmospheric pollution.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

The Water Law establishes the basis for the sustainable management of water resources, taking into account the fragile aquatic ecosystems and claims a greater integration of the qualitative and quantitative aspects of both surface water and groundwater. The main goal of this statute is to eliminate hazardous substances and contribute to sustainable water use by executing specific measures to ensure gradual protection of the water and its associated land.

More specifically, this statute and the Law of Water Resources Use stipulate that activities that require a significant use of water resources or may have a relevant impact on water resources are subject to specific authorisations, licences or concession agreements.

In addition, the Law of Ownership of Water Resources regulates the concept of 'water domain'. This law applies to water, stream beds, waterfront zones, bordering areas, protected areas and maximum infiltration areas, and constitutes the legal background for the public water domain, providing a classification of the water domain for seas, rivers, lakes and other water resources. Moreover, this statute rules on the recognition of private property over parts of public stream beds and waterfront zones, and vice versa.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

The Legal Regime of Nature and Biodiversity Preservation has implemented the Nature Preservation Fundamental Network, which consists of the following areas:

- areas encompassed by the National System of Protected Areas (NSCA);
- National Ecological Reserve areas;
- National Agricultural Reserve areas; and
- public water domain.

Under the above-mentioned legal framework, the NSCA includes the National Network of Protected Areas (NNPA), areas integrated in the Natura 2000 Network and other areas protected under international agreements. In particular, the NNPA labels areas as national parks, natural parks, natural reserves, natural monuments, or protected landscapes, and awards them specific protection measures with the aim of maintaining biodiversity, ecosystem services and geological heritage, as well as to enhance landscapes.

Although the Legal Regime of Nature and Biodiversity Preservation has set forth the rules applicable to the protected areas, it does not preclude the application of the specific legislation relevant on this matter as, for example, the Legal Regime of the National Ecological Reserve and the Legal Regime of the National Agricultural Reserve.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

The Legal Regime of the Preservation of Natural Landscapes and Wild Flora and Fauna is the statute that implements the Birds Directive and the Habitats Directive in order to ensure the protection of wild species of flora and fauna and the preservation of natural habitats. The main purpose of this legislation is the creation and conservation of a network of sites commonly known as the Natura 2000 Network.

The legal regime sets out procedural and substantive protection rules, applicable plans and projects that are likely to have a significant effect on a Natura 2000 Network site. Although it is applicable to several types of fauna and flora species, it provides for specific rules regarding priority species, which have a most stringent scheme of protection.

In particular, this piece of legislation establishes Special Protection Areas and Special Areas of Conservation, which are subject to specific regulation in order to protect or restore the level of conservation of populations of specific species of birds and natural habitats or populations of species, respectively.

As a general rule, destroying or disturbing protected wild species of flora and fauna and possession or trade of such species is prohibited and may be subject to administrative penalties and to criminal liability under the Portuguese Criminal Code.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

The General Regulation of Noise and the Law of Noise Assessment and Management are the two key statutes concerning noise emissions, although municipal regulations also play a major role on this matter, especially in relation to noise zoning.

The limits imposed by law depend on factors such as the location or the time of day at which the noise is produced. Nonetheless, if duly justified, it is possible to exceed such limits to a certain extent by obtaining a special municipal noise allowance licence. As a general rule, the maximum noise limits fluctuate between 55dB(A) and 65dB(A) and, in sensitive areas (eg, near houses, hospitals and schools) such limits are reduced to 45dB(A) and 55dB(A).

The police, the municipal authorities and the General Inspectorate on Agriculture, Sea, Environment and Planning are some of the entities that enforce compliance with these regulations.

Vibrations may also be deemed included in the concept of 'noise' for purposes of the legal frameworks.

With regard to odours, there are no specific applicable rules, although it is a matter often taken into account by regulatory and licensing authorities, notably when assessing the environmental impact of certain projects.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

At a general level, the Environmental Policy Basis Law approved by Law No. 19/2014 of 14 April sets out:

- the principle of liability of anyone who threatens or damages the environment, whether directly or indirectly, acting intentionally or negligently; and
- the principle of restoration, under which whomever causes environmental damage must restore the affected environment to its prior condition.

Although the definition of 'environmental damage' is absent from the Environmental Policy Basis Law, the Environmental Liability Law defines 'damage' as an adverse measurable change of a natural resource or a measurable deterioration of a natural resource service which may occur directly or indirectly.

Portuguese law establishes three types of environmental liability: criminal, administrative and civil.

Criminal liability, which may result in prison sentences or fines, is set out in articles 278, 279, 279 A and 280 of the Portuguese Criminal Code, which criminalise damage to the environment, pollution and undertaking activities dangerous to the environment.

The Environmental Liability Law is generally applicable to threats or damage to the environment made by economic activities and regulates both administrative and civil liability for environmental damage. Administrative liability constitutes the responsible economic operator in the obligation to adopt and pay for measures to prevent and repair the damage caused or threatened.

Civil liability stems from offences to third-party rights or interests through damage of environmental components. Despite operating independently from administrative liability, civil liability cannot be imposed if the agent has already repaired the damage under the administrative liability framework.

The competent authority regarding compliance with the rules provided by the Environmental Liability Law is the Portuguese Environment Agency.

Environmental taxes

11 | Is there any type of environmental tax?

There are several environmental taxes currently in force in Portugal. In fact, the Environmental Policy Basis Law stipulates that environmental taxation may be used as an instrument to environmental policies as a means to remove burdens to good environmental practices and encumber the most polluting activities.

Environmental taxation generally applies to activities regarding water, waste, or emissions.

For instance, the Law of Water Resources Use establishes a water resources tax over licensed activities that negatively impact or may potentially impact the water resources. The Legal Framework of Waste Management provides for an economic and financial system according to which different taxes may be imposed such as, among others, a tax imposed during the licensing procedures, a waste management tax and a registration tax. The Law of Air Pollution Prevention sets out a tax for the issuance of an Air Emissions Title.

Environmental taxes such as these lawfully accumulate with general taxes on real estate and corporate return and there is no track-record of double taxation issues being raised on such regard.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

Pursuant to the Law of Integrated Prevention and Control of Pollution and Emissions, prior to the start of operations, hazardous activities require the issuing of an environmental licence, to be granted according to the applicable licensing procedures. Likewise, prior to the start of operations, the facility must be inspected in order to verify whether it has been implemented according to its licence.

In addition, some activities are subject to specific regulations, notably:

- the management of hazardous waste, regulated by the Legal Framework of Waste Management, by Decree-Law No. 3/2004 of 3 January, and by Ministerial Order 172/2009 of 17 February (Statute of Integrated Centres of Recovery, Assessment and Disposal of Hazardous Waste); and
- the land transport of hazardous products or substances, regulated by national statutes (namely Decree-Law No. 41-A/2010 of 29 April) and by European or international regulations.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

There are several provisions regarding hazardous products and substances, depending on the issues to be addressed.

Pursuant to the Legal Framework of Hazardous Products and Substances, the authorisation for the installation of activities involving hazardous substances is subject to several preventive conditions (such as the preparation of preventive policy plans, security reports or emergency plans).

Regarding the classification, packaging and labelling of hazardous substances and preparations, Decree-Law No. 98/2010 of 11 August is the main statute on hazardous substances, and Decree-Law No. 82/2003 of 23 April, as amended by Decree-Law No. 155/2013 of 5 November, provides for the rules applicable to hazardous preparations. This legislation sets forth a list of substances that cannot be put on the market and requirements that must be complied with in order that the trading of certain hazardous substances can be allowed. Furthermore, there is an obligation to notify the Public Administration of new compounds containing hazardous substances and to label and pack compounds containing hazardous substances.

The transport by land of hazardous products or substances is also subject to several requirements determined either by national statutes or by EU or international regulations. In broad terms, the transportation of such goods may be carried on by authorised or licensed entities using authorised and adequate vehicles; notifications shall be made to the relevant crossed countries, and packages and vehicles shall be duly marked and labelled.

Finally, Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals sets out specific duties and obligations (eg, registration of substances with the European Chemicals Agency) on manufacturers, importers and downstream users of substances, mixtures or preparations.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

The main preventive measures concerning industrial accidents are set out in the Legal Regime of Hazardous Products and Substances.

According to this statute, security regulations for the different types of industries must impose compulsory obligations, like the implementation of a serious accident prevention policy or an internal emergency plan. Furthermore, the competent authorities may suspend or close any activity when a material risk for human health or for the environment is detected.

On the other hand, the Legal Regime of Hazardous Products and Substances imposes on public authorities and certain industries the obligation to carry out specific actions to avoid accidents involving hazardous substances (eg, drawing a prevention plan or conducting accident drills). Breach of its provisions may determine the application of administrative penalties, which can range from fines to the seizure of goods and assets.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

The main environmental aspects to consider in M&A transactions are the following:

- compliance with the relevant environmental obligations, of which the most relevant are usually related to emission limits and to waste management conditions;
- the availability of the relevant environmental permits, the most important of which are the activity and operation licences, water extraction and wastewater discharge authorisations, waste production and management authorisations and the integrated environmental authorisation;
- the existence of administrative or judicial proceedings (current or envisaged) in connection with environmental issues;
- the existence of soil pollution and pollution of the associated underground water; and
- the existence of historical environmental damage and liability.

In addition, it is important to take into account whether the transaction is implemented by means of an asset deal or share deal. The acquisition of shares entails that all environmental liabilities are assumed by the buyer. On the contrary, asset purchases may reduce the liabilities to be assumed by the buyer but require transferring or obtaining the permits to carry out the activity.

Alternatively, in the context of M&A transactions there are a number of legal aspects that may need to be considered, in particular relating to:

- energy consumption;
- water domain;
- licence to operate underground storage tanks;
- public liability insurance or environmental incidents insurance coverage;
- asbestos, polychlorinated biphenyls;
- chemical storage and handling; and
- change of control provisions requiring prior notice of authorisation from regulatory bodies.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

In general terms, the environmental aspects to consider in M&A are also applicable to a wide variety of transactions.

In real estate transactions, soil and water pollution are the most relevant issues. Alternatively, compliance with environmental obligations and the availability of the relevant permits to carry out the activity are the most relevant aspects that must be observed in transactions regarding financing or capital markets. Exposure to prospective damage compensation under the Environmental Liability Law and to potential offences under the Legal Framework of Administrative Offences should also be assessed.

In corporate restructuring and bankruptcy proceedings it must be taken into account that if the activity is assigned to another entity, the relevant permits and concessions must also be transferred and that the closure or dismantling of certain types of industries may be subject to specific environmental permits.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

The legal framework applicable to public procurement procedures is set out in the Public Contracts Code enacted by Decree-Law No. 18/2008 of 29 January (as amended by Decree-Law No. 33/2018 of 15 May). The Public Contracts Code establishes a clear differentiation between pre-contractual procurement procedures and the material execution of public contracts, providing for different rules for each of these instances.

Although the sections of the code dedicated to the material execution of public contracts do not establish specific rules tackling environmental aspects, the sections on pre-contractual procedures do have rules on the public authorities' duties to take into account environmental issues when preparing and drafting the specifications of public contracts; and the high-level scrutiny of the bidders' overall compliance with environmental aspects.

In works contracts, whenever the intended construction falls under the Legal Regime of Environmental Impact Assessment, either owing to its location or the specific characteristics of the construction, the execution project to be included in the pre-contractual procedures' specifications shall comprehend an environmental impact statement (when applicable) and the bidders' offers must evidence the compliance with the terms and conditions of such statement.

With regard to the scrutiny of the bidders' overall compliance with environmental aspects, it should be noted that not only must the bidders provide evidence that they hold all necessary licences (including in the environmental field) necessary to comply with the terms of the contract to be awarded, they must also submit several statements and public documents attesting the absence of any administrative or criminal convictions related to business activities (which include convictions by breach of environmental laws). Members of the managing bodies of bidders must also submit such statements evidencing absence of convictions.

Finally, environmental requirements are increasingly foreseen in public procurement procedures pursuant to EU policies. These requirements are part of 'Green Public Procurement', under which Europe's public authorities use their purchasing power to choose environmentally friendly goods, services and works.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

The general rule under the Legal Regime of Environmental Impact Assessment is that public and private projects that could have a significant effect on the environment are subject to an environmental impact assessment (EIA), which in turn gives rise to an environmental impact statement (EIS). Positive EISs do not constitute licences; rather, they are a priori binding conditions to obtain a certain authorisation or decision.

EIAs are particularly required for projects within the activities of agriculture, mining, oil, power generation, steel industry, chemical industry, infrastructures, hydraulic works and waste management facilities. In addition, depending on the characteristics of a project, the responsible EIA authority or the responsible government bodies may decide that such project should be subject to an EIA.

In exceptional circumstances it is possible to request an exemption from an EIA (eg, if the project considered to be of potential national interest under Decree-Law No. 154/2013 of 5 November).

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

The main steps of an EIA procedure are the following:

- preliminary and optional steps:
 - the project sponsor may propose a definition of the EIA's scope containing the characteristics, location and a description of the project;
 - the EIA authority shall forward it to certain institutions to obtain their opinion; and
 - a public consultation may be required by the project sponsor and decided by the evaluation committee; and
- without prejudice to the steps described above:
 - the EIA procedure is initiated by the project sponsor filing the EIS with the relevant licensing or authorisation body, which will in turn submit it to the EIA authority;
 - the EIA authority submits the EIS to the competent authorities in order for them to appoint members of the evaluation committee;
 - on the basis of the assessment of the evaluation committee, the EIA authority declares the conformity or non-conformity of the EIS (in the case of non-conformity, the procedure is concluded);
 - the EIA is submitted to public consultation, the result of which is sent by the EIA authority to the evaluation committee;
 - the evaluation committee shall prepare and send to the EIA authority a report with its final opinion;
 - the EIA authority shall provide the minister responsible for the area of environment with the final environmental impact proposal; and
 - the minister responsible for the area of environment will issue an environmental impact statement.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

In Portugal, environmental responsibilities are shared between the Portuguese state (central administration) and municipalities (local administration). At state level, the main public entities with environmental responsibilities are the following:

- the Ministry of the Environment, Planning and Energy;
- the Regional Development and Coordination Committees;
- the Water and Waste Services Regulatory Entity;
- the Nature and Forests Preservation Institute;
- the Portuguese Environment Agency; and
- the Agriculture, Sea, Environment and Planning General Inspectorate.

Through these entities, the Portuguese state enacts basic environmental legislation and supervises, monitors and sanctions most activities concerned with the environment.

Municipalities also have powers on environmental protection that must be executed in accordance with the regulations issued by the state. The main environmental powers of the municipalities concern the activity of granting licences, urban waste regulation and definition of noise limits.

Investigation

21 | What are the typical steps in an investigation?

In general, facilities subject to environmental regulation may be inspected and monitored by the competent regulating authority and the respective operators must provide it with the relevant information.

The investigation procedure following the breach of environmental regulations constituting administrative offences is subject to the rules established by the Legal Framework of Environmental Administrative Offences and, on a subsidiary level, to the Legal Framework of Administrative Offences set out in Decree-Law No. 433/82 of 27 October.

Whenever a public officer witnesses or becomes aware of an administrative offence (which may occur through a complaint submitted by an individual), an official report must be drawn up describing:

- the facts;
- the time and circumstances under which the offence was committed or detected;
- the identification details of the offender and of witnesses; and
- the name of the reporting public officer.

Upon receiving the report, which serves as evidence of the reported facts, the administrative authority may decide not to proceed to the investigation phase if the reported offence is minor, the offender's record is clean and if the latter has not been given a warning by the administrative authority in the preceding three years.

However, if these conditions are not all met, the administrative authority must proceed to the investigation phase, where it has 180 days to gather and examine all evidence (this deadline may be extended for a further 120 days). For this purpose, the administrative authority must be granted access to the facilities or sites where inspected activities take place. It must be granted all the requested information, documentation and any other elements.

Following investigation, the administrative authority may issue a resolution:

- imposing sanctions to the offender; or
- filing the proceedings if no violation has been evidenced.

However, before this decision is issued, the offender is notified of the proceedings, together with all relevant elements for him or her to ascertain all relevant aspects of the expected decision. The offender has 15 business days to lodge a written response, submit any relevant documents or summon witnesses.

The decision under which sanctions are imposed may be appealed against judicially.

Administrative decisions

22 | What is the procedure for making administrative decisions?

The procedure commences at the request of an individual or a public authority. Thereafter a preliminary investigation is carried out in which all relevant facts and allegations are collected and examined. Finally, the decision is issued by the competent authority.

As a general rule, the parties have the right to be heard before the decision is made (the project decision phase). Under this right, the private party may provide to the public authority all relevant evidence and summon witnesses. The decisions rendered can be appealed in court.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

The sanctions and remedies that may be imposed by the regulator for violations of mandatory environmental rules are usually fines, which may range from €200 to €5 million, depending on the seriousness of the offence and whether the offender is a legal person. Ancillary sanctions may also be imposed and these may include, inter alia, the following:

- appropriation by the state of any objects of the producers or agents used in such activities;
- exclusion of any rights to claim any subsidy or benefits from any public entities;
- compulsory closure of any premises and facilities subject to previous authorisation or licensing; and
- suspension of any applicable authorisations, licences or permits.

In addition to these sanctions, the offender may also be obliged to undertake any suitable measure to prevent and mitigate the environmental damage caused and to restore the status quo ante.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

Any administrative decision taken as a result of an administrative procedure may be appealed for judicial review. Should there be an authority in a higher position in the hierarchy to the one that has issued the decision, an administrative appeal may also be filed.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Environmental law proceedings take place in administrative, civil and criminal courts depending, in each case, on the affected interests and the applicable regulations. Civil claims, notably those related to environmental liability for damage, usually proceed in civil courts. Proceedings related to environmental offences are resolved before criminal courts if the offence is regarded as a criminal offence. With regard to administrative offences, the claims regarding an appeal for judicial review of

the decisions of the competent authorities or regulators may proceed in administrative courts or in civil courts, depending on the nature of the offence and respective applicable regime.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

Portuguese courts have full powers to confirm or quash any kind of administrative decisions regarding any kind of infringements and breaches of environmental law.

Furthermore, in the case of criminal offences, penalties such as fines or imprisonment may also be imposed by Portuguese courts. As a general rule, a court cannot aggravate the original decision from a public authority being appealed exclusively by the private party. However, a fine may be aggravated by the court if the offender's financial situation has considerably improved. In addition, administrative decisions concerning environmental infringements may be aggravated by the courts.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Under the Environmental Liability Law, civil liability may arise from damage to individual rights or interests through damage to an environmental component. Both contractual and non-contractual civil claims regarding breaches and infringements of environmental law are allowed in Portuguese courts when a damage or nuisance is caused by such breach or infringement.

Defences and indemnities

28 | What defences or indemnities are available?

Allocation of liability

Both individuals and legal entities may incur civil, criminal and administrative liability.

Criminal liability is fault-based, and arises when the conduct has been committed intentionally or, in some cases, negligently. The criminal liability of a legal person does not exclude nor does it depend on the criminal liability of an individual acting in a leadership position of such legal person. However, the criminal liability of legal persons can be excluded when the relevant agent has acted against express orders or instructions.

Under the Legal Framework of Environmental Administrative Offences, a fine may be reduced when circumstances arising before or after the date of the offence significantly diminish its illegality, the degree of fault of the agent or the necessity of the fine. For this purpose, the agent must have shown regret (namely by repairing the damage to the extent possible and complying with the breached provision or order); or, if two years have passed since the offence, the agent has shown good behaviour.

Administrative liability for environmental damage may be strict or fault-based. If there is more than one person involved, liability for the infringement is generally joint and several. When the environmental damage is caused by more than one agent, each agent is jointly liable, without prejudice to the right of recourse to be determined by each agent's degree of liability or fault. If determining this degree is not possible, the liability is presumed equal.

Under the Environmental Liability Law, the operator does not have to bear the costs of prevention or reparation measures if it is established that the environmental damage or imminent threat:

- has been caused by third parties and despite the adoption by the operator of adequate safety measures; or
- results from compliance with an order or instruction of a public authority that has not been issued in the context of an emission or accident caused by the operator's activity.

The operator is still obliged to adopt and execute such measures, but has a right of recourse over the third party or over the administrative authority, as applicable.

In addition, the operator does not have to bear the costs of prevention or reparation measures if it is established that:

- there has been no intention or negligence on causing the damage; and
- the damage was caused by an expressly allowed action that has complied with all the conditions of the relevant authorisation and with the legal provisions, or has been caused during an activity that was not considered to be susceptible to cause environmental damage at that time.

Civil liability can be either fault-based or strict. Should environmental damage arise from a legal person's action, the management may be jointly and severally liable with the legal person. In addition, if the operator is a legal person controlled by another legal person, the latter may also be jointly liable where legal personality has been abused or where it constitutes a fraud against the law.

Limitation period

Under the Environmental Liability Law, liability for damage caused by emissions, incidents or happenings is limited to a period of 30 years from the date the damage was sustained.

According to the Legal Framework of Environmental Administrative Offences, the limitation period for administrative offences is five years for very serious offences and serious offences and three years for minor offences. The limitation period is counted from the date of the offence.

Pursuant to the Portuguese Criminal Code, the limitation period for basic environmental crimes may range from five to 10 years.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

Under the Portuguese Criminal Code, directors, officers and company representatives can be held personally responsible for any environmental wrongdoing or offence caused by the company (which may be held criminally responsible as well). The criminal liability of a legal company does not exclude nor does it depend on the criminal liability of an individual acting in a leadership position of such legal person, but the criminal liability of legal persons can be excluded when the relevant agent has acted against express orders or instructions.

Under the Legal Framework of Environmental Administrative Offences, directors, managers and shareholders are jointly responsible for the payment of fines. Where a fine has been imposed on a legal person, its directors, managers, and persons who perform managerial functions are secondarily responsible for such payment if:

- they bear responsibility in the insufficiency of the legal person's assets to pay; or
- the offence was committed prior to them taking office but the final decision imposing a fine is notified during their office, and it is not paid due to their conduct. They may also be secondarily responsible for the payment of procedural costs.

According to the Environmental Liability Law, where a legal person is liable for any damage or an imminent threat of damage to the

environment, joint and several liability is imposed on the managers, administrators or directors, who become personally liable together with the company itself. This rule is set out in the Water Law.

Furthermore, a legal person may be held liable in civil claims for any damage caused, including damage caused by a director or officer. On the other hand, the directors and officers of the company may also be held liable in relation to the company itself, the shareholders and the company creditors for any damage caused as a consequence of their negligent or guilty acts.

Appeal process

30 | What is the appeal process from trials?

Under Portuguese law, there are two levels of appeal plus an additional appeal to the Constitutional Court. However, in order to walk through all the appeal levels several requirements must be met.

As a general rule, judgments issued by administrative, civil and criminal courts at first instance may be appealed against in second-instance courts. Judgments issued in second-instance courts may be appealed before the Supreme Court of Justice or the Administrative Supreme Court, depending on the matter at hand.

Notwithstanding this, certain matters may be decided at first or second instance without the possibility of lodging an appeal before the higher court. Alternatively, in a few cases and under certain conditions, rulings issued at first instance may be directly appealed before the Supreme Court of Justice or the Administrative Supreme Court.

In addition, if there is a violation of constitutional norms, the matter may be raised before any common court. The decision of such court on this constitutional issue may be appealed before the Constitutional Court.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Portugal is a contracting party to many relevant international treaties regarding the environment, including:

- the United Nations Framework Convention on Climate Change, New York, 1992;
- the Convention on Wetlands, Ramsar, 1971;
- the Protocol to the United Nations Framework Convention on Climate Change, Kyoto, 1997;
- the Paris Agreement 2015;
- the Convention on the Conservation of European Wildlife and Natural Habitats, Berne, 1979;
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, DC, 1973;
- the Convention for the Protection of the Mediterranean Sea against Pollution, Barcelona, 1976;
- the Stockholm Convention on Persistent Organic Pollutants, Stockholm, 2001;
- the Convention on Long-range Transboundary Air Pollution, Geneva, 1979;
- the Convention on the Transboundary Effects of Industrial Accidents, 1992;
- the Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 1991;
- the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam, 1998; and
- the Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

International treaties are binding in Portugal as soon as they are published in the State Official Gazette. Therefore, regulatory policy is directly affected by these international treaties to the same extent as state regulations.

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

There are no updates at this time.

Coronavirus

34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

A state of emergency was in force in Portugal from 19 March 2020 to 2 May 2020, as declared by the President of the Republic through Decrees Nos. 14-A/2020 of 18 March, 17-A/2020 of 2 April 2020 and 20-A/2020 of 17 April 2020. Following this, the government approved several extraordinary measures in force during each successive period of the state of emergency, through Decrees Nos. 2-A/2020 of 20 March 2020, 2-B/2020 of 2 April 2020 and 2-C/2020 of 17 April 2020. The state of emergency ended on 2 May 2020, but not all the measures adopted to contain and prevent the spread of covid-19 were lifted.

Although no specific measures were adopted in relation to environmental matters, and no changes were enacted to environmental laws or regulations, under Law 1-A/2020, as amended by Law 4-A/2020, administrative deadlines for acts to be performed by individuals and companies were suspended. This suspension benefited administrative procedures as a whole, therefore encompassing environmental procedures, such as environmental impact and licensing procedures, administrative sanctioning procedures and, in general, any procedures where actions from the private parties were required to secure a right or comply with regulatory obligations.

Law 16/2020 amended Decree-Law 10-A/2020 to stipulate that:

- 1 20 working days after the entry into force of Law 16/2020 (ie, 3 July 2020) is the term for administrative deadlines that would have fallen during: the above-mentioned suspension regime; or the 20 working days after the entry into force of Law 16/2020;
- 2 administrative deadlines that would have fallen more than 20 working days after the entry into force of Law 16/2020 (ie, after 3 July 2020) will expire as per their original term; and
- 3 limitation and prescription periods that cease to be suspended as a result of the amendments introduced by Law 16/2020 are extended by the period of time for which they were suspended.

This means that, apparently, administrative deadlines that were due to expire after 3 July 2020, and that are not considered limitation and prescription periods, were never suspended and maintain their original terms. The provisions set out in points (1) and (2) above do not apply to administrative deadlines in administrative offence proceedings. Decree-Law 10-A/2020 suspended the deadlines by which the authorities tacitly grant authorisations and licences requested by individuals and companies. Furthermore, deadlines that may result in tacit grants of

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authorisations or licences within the scope of an environmental impact assessment were also suspended, even when the procedure was not initiated owing to a private undertaking's request. However, Decree-Law 20/2020 revoked this suspension and, hence, the terms for tacit grants began to run again on 2 May 2020.

South Korea

Tong Keun Seol, Sangmin Kim and Jay Lee

Lee & Ko

LEGISLATION

Main environmental regulations

1 | What are the main statutes and regulations relating to the environment?

Article 35 of the Korean Constitution codifies the constitutional rights of citizens to the environment and provides a guideline and framework to aid (1) the interpretation of the rights of citizens and obligations of the state with respect to the environment and (2) the formation of relevant legal principles. Based on article 35 of the Korean Constitution, the Framework Act on Environmental Policy (which sets forth the purpose of the environmental policy and basic principles in environmental law) has been enacted, which serves as the cornerstone of Korean environmental law.

Korea's overall environmental policy and related regulations are as follows:

- the Framework Act on Environmental Policy;
- the Environmental Impact Assessment Act;
- the Act on the Integrated Control of Pollutant-Discharging Facilities;
- the Act on the Control and Aggravated Punishment of Environmental Offences, Etc.;
- the Environment Dispute Mediation Act;
- the Act on Liability for Environmental Damage and Relief Thereof;
- the Sustainable Development Act; and
- the Framework Act on Low Carbon, Green Growth.

In addition, other specialised environmental statutes which have been enacted and implemented to deal with different sources of pollutants are listed below:

- the Soil Environment Conservation Act;
- the Clean Air Conservation Act;
- the Water Environment Conservation Act;
- the Noise and Vibration Control Act;
- the Malodour Prevention Act;
- the Framework Act on Resource Circulation;
- the Wastes Control Act;
- the Construction Waste Recycling Promotion Act;
- the Act on Resource Circulation of Electrical and Electronic Equipment and Vehicles;
- the Act on the Promotion of Saving and Recycling of Resources;
- the Natural Environment Conservation Act; and
- the Natural Parks Act.

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

As of 2017, the Act on the Integrated Control of Pollutant-Discharging Facilities has been promulgated and is now applicable to large-scale

business sites. Under this new legal regime, an integrated environmental management system (IEMS) was introduced and the scope of affected industries will gradually expand over five years from its introduction, which began with electricity (power generation), steam supply and waste disposal (incineration) in 2017. The IEMS integrated previous regulations into a single integrated management permit per business unit, thereby simplifying the process. Previously, businesses had been regulated by seven different environmental regulations requiring them to obtain up to 10 different types of permits for each source of pollutants. Furthermore, the IEMS abandons the conventional, uniform application of the regulations from the past and seeks to impose individualised obligations for each business owner by requiring differentiated levels of permissible emissions, which are determined by considering the potential environmental impact of the intended business model and the effective ways of reducing the pollutant emissions. For this, businesses may voluntarily adopt the best available techniques economically achievable, and if they do, the government will impose less stringent conditions for the issuance of the integrated permit and less frequent government audits. The IEMS also provides legal grounds for post-management of business facilities by adopting periodic re-examination of the validity or appropriateness permission conditions that had been imposed. In the event of a fundamental change of circumstances, permission conditions may be changed to reflect such change.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

The Soil Environment Conservation Act regulates matters relating to soil pollution in Korea. This act imposes two types of liability for soil contamination: monetary compensation for the damage suffered (article 10-3) or purification obligations (article 10-4). While the former is a type of strict liability borne by the persons responsible for the soil contamination, the latter is a liability toward the public borne by the limited scope of persons designated by the law to carry out a detailed soil survey, purification of contaminated soil or a project for improving contaminated soil (collectively, 'soil purification, etc').

Here, the persons responsible for soil purification, etc, are:

- 1 any person who causes soil contamination by discharging, leaking, dumping, neglecting soil contaminants or committing other acts;
- 2 the proprietor, occupant or operator of a facility subject to the control of soil contamination constituting a cause for soil contamination at the time soil contamination occurs;
- 3 any person who has comprehensively succeeded to the rights and liabilities of either (1) or (2) on account of merger, inheritance or other reasons; and
- 4 any person who previously owned or presently owns or occupies land on which soil contamination has occurred.

Among the above, only (4) may be relieved from liability if he or she was unaware of the soil contamination and was not negligent in preventing soil contamination at the time he or she acquired the land on which soil contamination has occurred (article 10-4(2)).

Regarding levels of contamination and clean-up, the first is the detection of contaminated soil through soil contamination inspection, among others. In areas that exceed the initial level of soil contamination (the Worrisome Standards), the following measures are taken to prevent further soil contamination: the installation or improvement of pollution prevention facility, improvement or transfer of facilities subject to soil pollution control, and restriction of the use of soil pollutants or suspension of their use. If the soil pollution becomes severe enough to exceed the upper level of soil contamination (the Countermeasure Standards), then the person responsible for purification, etc., is ordered to conduct a project for improving soil contamination, or the governor or other competent government authority may execute such a project at the expense of that person (article 19). Here, the definition of the Countermeasure Standards is the levels of soil contamination that are likely to obstruct human health and properties or rearing of animals and plants, and accordingly would necessitate countermeasures (article 16), whereas the severity of the Worrisome Standards is about 40 per cent of the Countermeasure Standards.

Regulation of waste

4 | What types of waste are regulated and how?

Under Korea's Wastes Control Act, the term 'wastes' is defined as 'such materials as garbage, burnt refuse, sludge, waste oil, waste acid, waste alkali, and carcasses of animals, which have become no longer useful for human life or business activities' (article 2(i)). The term 'treatment' means the collection, transportation, storage, recycling and disposal of wastes (article 2(v-iii)). This act recognises the following two main categories of waste and provides a differentiated management system for each category: industrial wastes and household wastes. A person in charge of the treatment of industrial wastes is obligated as a discharger to report the discharge of industrial wastes. On the other hand, each local government is in charge of the treatment of household wastes and does not bear any reporting obligation of the discharge of the household wastes. Furthermore, contrary to the unlawful dumping of industrial wastes, which is subject to criminal penalties, dumping of household wastes only leads to the imposition of administrative fines (articles 63(i) and 68(3)(i)).

Industrial wastes are further categorised into designated wastes, construction wastes and ordinary industrial wastes. Among the types of industrial wastes, designated wastes, which are either harmful substances, such as waste oil and waste acid, which may contaminate the surrounding environment, or medical wastes that may cause harm to human bodies, are more strictly regulated than ordinary industrial wastes.

One unique feature of Korea's Wastes Control Act in relation to household wastes is a pay-as-you-throw system, commonly known as 'Wastes Jong-Ryang-Je'. This is a government policy based on the polluter-pays principle, whereby the dischargers of household wastes are subject to the collection of service charges for the treatment of household wastes depending on the kind, quantity, etc., of the household wastes discharged. The service charges are collected by selling standard waste bags and waste marks (article 14(5)).

For the recycling of wastes, the Framework Act on Resource Circulation was promulgated in 2016 and has been implemented as of 2018. This act introduced the new concept of 'resource circulation' and provides general principles for its promotion. For specialised regulations on recycling depending on the types of wastes, the Act on the Promotion of Saving and Recycling of Resources, the Construction Waste Recycling Promotion Act and the Act on Resource Circulation of Electrical and Electronic Equipment and Vehicles have been implemented.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

Air emissions are regulated by the Clean Air Conservation Act. This adopts different sets of regulations for the emissions by categorising the sources of air pollutants into (1) places of business, (2) living environments and (3) motor vehicles or ships. Korea's regulation of air emissions is mainly focused on regulating the places of business, which is an example of a stationary source. Main features include setting the permitted level of emissions, permits, collection of emission charges and administrative orders such as suspension of work or imposition of penalties. The act defines air pollutants as 'gas or granular among matters that exist in the air, which is acknowledged as a cause of air pollution as a result of the examination and assessment'. Effluent charges are collected from the businesses that emit air pollutants (article 35).

The act sets permissible emission levels of air pollutants emitted from air pollutant-emitting facilities, thereby adopting a concentration-based regulation instead of an overall quantity-based regulation (article 16(1)). Any person who intends to install emission facilities shall obtain a permit from the relevant mayor or governor or file a report thereon (article 23(1)) and install air pollution prevention facilities in accordance with the polluter-pays principle (article 26(1)).

With regard to rules concerning the energy efficiency of buildings, certain buildings used by persons, the state, local government or public entities for their business, or certain energy-using facilities of excessive energy-consuming business entities, are subject to certain heating and cooling temperature restrictions under the Energy Use Rationalisation Act (article 36-2, etc.). Failure to comply with this restriction will lead to recommendations, corrective orders or administrative fines.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

The main legislation addressing the protection of fresh water is the Water Environment Conservation Act, which is the framework act for the prevention of water pollution. The act categorises water quality pollutants by methods of emissions and their location into point source, non-point source and miscellaneous sources. Under the act, for point source pollutants similar types of regulations for places of business prescribed under the Clean Air Conservation Act have been implemented.

For the regulation of sewerage, which comprises the largest proportion of water quality pollutants, the Sewerage Act is implemented. Livestock excreta is separately regulated by the Act on the Management and Use of Livestock Excreta.

The primary laws addressing the protection of sea water are the Marine Environment Management Act and the Act on Conservation and Utilisation of the Marine Environment. According to the Marine Environment Management Act, discharging pollutants from ships or wastes generated from land into the sea is prohibited in principle (articles 22 and 23).

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

The primary laws addressing the protection of natural spaces and landscapes are the Natural Environment Conservation Act and the Natural Parks Act.

The objectives and purpose of the Natural Environment Conservation Act are the protection of the natural environment from artificial damage,

conservation of the ecosystem, preservation of natural scenery, etc (article 1). Under this act, areas whose natural ecology and natural scenery need particular conservation are designated and managed where certain types of act that may harm the environment are prohibited.

Korea's natural parks (which include the national parks) are administered pursuant to the Natural Parks Act. Once designated as a natural park, certain privately owned properties within the park become subject to regulations under the act, which are intended to preserve and protect the natural landscape of such areas (including certain restrictions on construction and other means of exercising one's ownership rights). In return, compensation for losses is offered to private owners for reasons prescribed in the Natural Parks Act.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

The primary laws addressing the protection of flora and fauna species are the Natural Environment Conservation Act, the Wildlife Protection and Management Act and the Act on the Conservation and Use of Biological Diversity. The Wildlife Protection and Management Act stipulates that no one shall capture, collect, release, naturalise, process, distribute, keep, export, import, remove, bring in (including dead animals in cases of processing, distribution, keeping, exporting, importing, removing or bringing in), damage or defoliate endangered wildlife unless otherwise stipulated by law (article 14(1)). Furthermore, those who intend to export, import, take out or bring in globally endangered species and products processed therefrom are required to obtain permission from the Minister of the Environment (article 16(1)). A violation thereof is punishable by imprisonment or a fine, depending on the level and type of the violation.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

The Noise and Vibration Control Act regulates noise and vibrations from factories, workplaces and construction sites and sets standards for noise and vibrations emitted from traffic, motor vehicles and aircraft. The law differentiates between permitted levels of noise and vibrations emitted depending on the classification of the neighbouring area (eg, residential areas, commercial areas, industrial areas within urban areas, agricultural and forest areas, and areas neighbouring hospitals and schools; article 7).

The Malodour Prevention Act regulates offensive odours by designating a malodour control area, setting the permissible levels of malodour emissions, filing reports for malodour emitting facilities, establishing malodour prevention plans. Enforcement measures include improvement orders and orders to suspend operations.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

The Act on Liability for Environmental Damage and Relief Thereof was enacted at the end of 2014 and entered into force in 2016. Under this act, the term 'environmental damage' is defined as damage (including a series of damage due to the same cause) inflicted on the life, body (including mental harm) or property of any third person by air pollution, water pollution, soil pollution, marine pollution, noise, vibration and other causes that occur from installing and operating a facility, provided that the damage inflicted on a business owner and the damage suffered by employees of the business owner in the course of their duties be excluded.

Prior to the enactment of this act, relief from environmental pollution was mainly covered by civil litigation which was both time-consuming and expensive as demonstration of the defendant's intention or negligence, causation, illegality, harm done to the plaintiff, etc, were required for monetary awards. To provide prompt and adequate relief to the victims, this act introduced strict liability, an obligation for business owners to have environmental liability insurance, presumption of causal relationship, the right to request information, and payment of relief money to the victims of environmental damage. However, this act also stipulated a liability cap for compensation, as it may impose too much of a burden on business owners such as strict liability, etc, with exemptions for the presumption of causal relationship.

Environmental taxes

11 | Is there any type of environmental tax?

As incentives for the conservation of the environment, Korea imposes environment-related charges and environmental taxes.

The types of environmental charges in Korea include charges for the improvement of the environment, water quality and marine environment, and charges for wastes, water usage, groundwater usage, emissions, etc. As a general principle for the imposition of charges, the Framework Act on the Management of Charges stipulates that 'Charges shall be imposed to the minimum extent necessary to fulfil the purpose of creation so that impartiality and transparency are secured, and no charges shall be imposed twice on the same subject of imposition unless any extraordinary grounds exist.'

Korea temporarily imposed transportation, energy and environmental taxes until the end of 2018. Korea has implemented an emission trading system but has not adopted or imposed a carbon tax.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

Contrary to the aforementioned regulations, which seek to prevent pollution affecting the general public caused by business activities dealing with hazardous substances or facilities, the Occupational Safety and Health Act aims to regulate hazardous activities for the prevention of industrial accidents and for the creation of a comfortable working environment for the safety and health of employees. It applies to all businesses or places of businesses within Korea, where harmful or dangerous machinery, apparatus, equipment and materials are being used or stored for industrial purposes.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

Hazardous products and substances are mainly regulated by the following laws and regulations:

- the Act on Registration, Evaluation, Etc. of Chemicals (K-REACH);
- the Chemicals Control Act (CCA);
- the Act on Safety Management of Consumer Chemical Products and Biocides (K-BPR); and
- the Framework Act on the Safety of Products.

K-REACH, the CCA and the respective regulations thereunder protect human health and the environment against risks caused by hazardous products and substances.

The CCA regulates general industrial chemical products (ie, it does not regulate other chemical products such as pharmaceuticals,

cosmetics, food-related products, agriculture-related products and fertilisers), and the chemicals regulated under this law categorised as: phase-in, new, toxic, restricted, prohibited chemical substances, etc.

Under K-REACH, 'hazardous characteristic' means the inherent properties of any chemical substance that cause adverse effects to human health or the environment, such as the toxicity of a chemical substance. Under K-REACH, any person who manufactures, imports or sells at least 100 kilograms per year of phase-in chemical substance or at least one ton per year of a non-phase-in chemical substance must report and register the uses, quantity, etc. of the chemical substance to the Minister of the Environment (article 10).

The K-BPR was newly promulgated on 30 March 2018 and came into effect on 1 January 2019. This act, which is substantially similar to the EU Biocidal Products Regulation (BPR), imposes safety and labelling standards for certain consumer chemical products and requires manufacturers and importers of biocidal products to obtain approvals from the Minister of Environment for their use of the biocides.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

Under the Occupational Safety and Health Act, 'industrial accidents' are defined as the death, injury or disease of employees caused by structures, equipment, raw materials, gas, vapour, powder, dust, etc. related to their duties, or by their work or other duties, whereas industrial accidents of serious degree are separately defined as 'serious accidents'. To prevent these industrial accidents, the business owners are obliged to, without limitation, establish a safety and health management system, adopt safety and health measures, implement protective measures against harmful or dangerous machinery and instruments, conduct periodic safety inspections, working environment measurements, health examination of employees, health and safety education, prepare and keep material safety data sheets, attach safety and health signs, and report industrial accidents.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

Compliance with environmental regulations may have a substantial impact on the valuation of a business to be transferred in an M&A transaction. In most cases, buyers carry out detailed legal due diligence.

Prior to acquiring a business that operates installations which require environmental permits, the buyer must check the existence, validity and duration of all required permits for every installation. The buyer must also be aware of all regulations applicable to the activities that are proposed to be carried out. Furthermore, non-compliance committed by the previous owner may give rise to potential risks for the buyer. Typical items on the checklists for the buyer include the previous non-compliance by the seller of the seller's obligations under relevant environmental regulations and modifications or deviations that contravene the conditions imposed to the seller under the original permit. Target company's emergency plans, security information and safety and health management regulations must also be thoroughly reviewed.

Most environmental permits are tied to a specific place of business and the possession and operation of such a place, making it less significant to distinguish a share deal from an asset deal from an environmental regulatory perspective. Although the change of control notification may be required, this is often not much more than a formality.

However, participants in an M&A transaction must keep in mind that such transactions do not relieve the parties from their environmental liabilities. In cases like soil contamination, liabilities may be enforced against the persons who contaminated, against the owner, and against the current possessor.

The violation of laws related to environmental matters such as water quality, air conservation and soil contamination is treated as a serious legal risk in M&A, as it may lead to suspension of operation or revocation of business permits.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

For real-estate transactions of (former) places of businesses, the existence of contaminants and the liability for their removal are the main environmental aspects to consider. According to the Soil Environment Conservation Act, the buyer of land becomes jointly liable with the previous owner and the polluter.

Violations of environmental laws may jeopardise continuation of business activities as they may result in the suspension of business or cancellation of business permits. In addition, liability for damage caused by environmental pollution may remain as a contingent liability. Consequently, in some cases, environmental aspects are treated as serious legal obstacles for financing, corporate listing and invitation of investments.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

The Act on Promotion of Purchase of Green Products has been enacted. As a practical implementation of this act, the Public Procurement Service (PPS) of Korea is enforcing a purchasing policy for a 'Public Procurement Minimum Green Product'. According to this policy, products supplied to the PPS under purchasing agreements with the PPS must satisfy the minimum green standards that regulate standby power, energy consumption efficiency, recycling products, emission of hazardous substances, etc. Public entities must purchase green products or reflect the standards in their designs.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

To promote environment-friendly, sustainable development and the healthy and pleasant life of citizens, the Environmental Impact Assessment Act mandates the environmental impact assessment to be completed before commencing any business, project or construction. The Environmental Impact Assessment Act thus enables the pertinent authority to forecast and assess the impacts of any plan or project and to formulate any necessary measures to conserve and protect the environment (article 1).

Article 22 of the act sets forth a list of businesses that are required to conduct an environmental impact assessment. However, there is criticism that the provision does not sufficiently cover businesses that may seriously impact, although small in scale, the environment and its surroundings. The businesses subject to an environmental impact assessment are:

- urban development projects;
- industrial site or complex development projects;

- energy source and water resource development projects;
- harbour development, road and airport construction businesses;
- river, mountainous district and particular areas of usage and development business;
- sports facilities, waste disposal facilities, national defence and military installation facilities and establishments; and
- businesses extracting earth, stone, sand, gravel and minerals.

A person shall be held criminally liable if the construction commences without an environmental impact assessment having been performed, or by submitting a fraudulent environmental impact assessment report. In such cases, the business entity may be found vicariously liable for such action (articles 74(2)(i) and 74(1)(iv)).

In addition to criminal liability, if any administrative measure (eg, permission or authorisation to proceed with the construction) was made despite the absence of any environmental impact assessment, such administrative measure will be deemed null and void.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

The process for an environmental impact assessment includes preparation of the draft reports, gathering of consensus from the residents, preparation of final reports and consultations with the Ministry of the Environment. During this process, the project implementer is obliged to carry out the agreed standards and to conduct a follow-up survey of environmental impact, and the relevant administrative authority must manage and monitor the project implementer's compliance with the agreed standards.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

The principal authority responsible for the administration and enforcement of Korea's environmental policy is the Ministry of the Environment (MOE). However, in addition to the MOE, many environmental matters are scattered into laws and regulations enforced by other ministries, which in some cases leads to a lack of efficiency in management. Problems such as duplication of regulations and unclear responsibilities occasionally arise. For example, the designation and management of wild flora and fauna, wildlife falls under the responsibility of the MOE; natural monuments fall under the Cultural Heritage Administration; fisheries fall under the Ministry for Food, Agriculture, Forestry and Fisheries; and forestry falls under Korea Forest Service. The MOE is responsible for water management and regulation, while the Ministry of Land, Infrastructure and Transport regulates water supply and dam construction. However, efforts are being made in Korea to integrate the management and regulation of water under the unified control of the MOE.

In the meantime, the authorities responsible for the enforcement of environmental laws will have the authority to impose sanctions, such as suspension of work, licence revocation or variation and administrative fines, and to grant permits or subsidies as prescribed in the individual laws.

Investigation

21 | What are the typical steps in an investigation?

Although variations exist depending on the applicable laws and regulations, the MOE and its affiliates may either routinely conduct inspections of regulated facilities or irregularly conduct investigations in the case of an incident. The powers of the regulatory authorities include the right to access land and buildings, to remove hazardous materials, to take samples of suspicious substances or to request a specific performance by the owner or operator in order to prevent further damage. If the investigator identifies non-compliance during such inspections or investigations, the investigator will initially discuss the alleged violations with facility personnel, conduct interviews, prepare written reports and give notice of violation identifying the practices or events constituting the alleged non-compliance. In the case of serious violations, the regulatory authorities may order the owner or the operators to take corrective measures or impose administrative sanctions. If the regulatory authorities believe that there has been a criminal offence, they may inform the public prosecutors and request initiation of criminal investigations.

Administrative decisions

22 | What is the procedure for making administrative decisions?

All types of administrative decisions, whether they be a grant of approvals or permits or imposition of sanctions concerning infringements of environmental law, are subject to the well-established administrative law of Korea, including, without limitation, the Administrative Procedures Act. For instance, prior to the rendering of a disposition that imposes duties on relevant parties or restricts their rights or interests, an administrative agency must give such parties prior notice of the title of the disposition, the factual grounds for the disposition, and the contents of, and legal basis for, the disposition, and advice that the relevant parties may present their opinions, etc (article 21(1)). The relevant parties must be given opportunities to present their opinions in a hearing, public hearing or otherwise in writing, orally or through information and communications networks (article 22). Depending on the nature of the dispositions, interested parties have the right to contribute or submit considerations, expert opinions or scientific studies.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

Environmental statutes authorise or otherwise provide statutory grounds for a wide range of civil liabilities, administrative sanctions and criminal penalties. The regulators decide on the extent of sanctions on a per day, per violation basis with reference to detailed disposition standards prescribed under relevant regulations (article 20 of the Administrative Procedures Act). Possible sanctions include requiring the installation of pollution control equipment, the cessation of activity alleged to be infringing, suspension of work, the shutdown of a facility, revocation of the permit and the imposition of administrative fines. Injunctive relief may also be pursued to require the abatement of the violation or environmental harm. In addition to substantive violations of the diverse environmental laws and regulations, the regulators may also exercise their enforcement powers for any process violations such as lying or misleading regulators or obstruction of investigations.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

For any appeal of regulators' decisions (eg, administrative dispositions), the general principles of the administrative laws (including the Administrative Litigation Act) apply, according to which anyone having legal interests to seek the revocation of a disposition or confirmation of its nullity can file a claim against the administrative agency that has made the disposition and make a request for revocation of a disposition (within 90 days of the date a disposition is known, provided that a revocation suit shall not be instituted after the lapse of one year for the date the disposition is made) or seek confirmation of nullity. Grounds for an appeal also include the denial of a permit or other exercise of the public authority having a negative impact on the plaintiff. Granting of a beneficial disposition to a third party may also be appealed if the revocation litigation is instituted by the plaintiff who is adversely affected by such disposition and is therefore found to have legal interests and standing to seek revocation of such disposition. The plaintiff may base its claims on factual findings and legal conclusions and can also challenge the extent or severity of the sanctions imposed by the regulator.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Environmental law proceedings include administrative litigations, which are often instituted against a disposition by an administrative agency, and criminal proceedings whereby persons accused of serious violations of environmental laws stand before trial. In the case of civil disputes for violations of environmental laws and regulations, civil proceedings may be initiated by the plaintiff seeking to recover his or her damages or any other forms of relief.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

In cases of violation of environmental laws, the courts of Korea may, with respect to the violators and responsible parties:

- grant or deny the payment of civil damages;
- decide on the illegality of the disposition being challenged either by revocation or confirmation of nullity or by upholding the regulator's decision;
- order injunctions or specific performance to suspend the effectiveness of disposition; and
- take such other actions or provide such other relief as permitted under the law and deemed appropriate by the court.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Other than relief under the Act on Liability for Environmental Damage and Relief Thereof, relief from environmental pollution among private parties is mainly based on civil claims under the Civil Act, including but not limited to: (1) owner's or possessor's demands for cessation of the disturbances (article 214, etc); (2) claims for monetary compensation for the damage suffered based on torts (article 750); (3) seller's liability for warranty against defects existing in the subject matter of the sale

(article 580); and (4) product liability and non-performance of contractual obligations are among the potential civil claims under Korea's civil laws.

Defences and indemnities

28 | What defences or indemnities are available?

The typical defences asserted include lack of intent (in the case of criminal liability) and the failure to establish the necessary elements for civil or criminal liability or imposing administrative sanctions. For civil claims, the burden of proof and statutes of limitation are among some of the essential issues commonly asserted by the defendants in environmental cases. Under the Act on Liability for Environmental Damage and Relief Thereof the burden of proof is mitigated. For administrative litigations, depending on the type and nature of the challenged disposition, the abuse of discretionary power, including disproportionality, infringement of the principle on trust protection and unconstitutionality of the statutory basis for the disposition may additionally be asserted.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

Criminal liability of directors and officers of a company for violations of environmental law is one of the most highly debatable and complex topics in Korea. Most individual environmental regulations have joint penalty provisions, which typically take the following form:

If a representative of a corporation, or an agent, employee, or any other servant of a corporation or an individual commits an offense described in the act in connection with the duties of such corporation or individual, not only shall the offender be punished accordingly, but such corporation or individual also shall be punished by the fine provided in the relevant Article: provided, that this shall not apply where the corporation or individual has not been negligent in giving due attention and supervision concerning the relevant duties to prevent such offence.

These joint penalty provisions provide the legal basis for the criminal prosecution of directors and officers for their management supervision negligence. Joint penalty provisions were frequently challenged before the Constitutional Court of Korea as being unconstitutional before the current wording was adopted by individual statutes.

Appeal process

30 | What is the appeal process from trials?

The judicial authority in Korea is exercised by courts on three levels: district court, high court and Supreme Court. For instance, following an administrative decision, the interested party has the right to contest an illegal disposition by an administrative agency or any other non-exercise of public power by filing administrative litigation. Once a judgment is made in the district court, it can be appealed to the high court, and the judgment of the high court may be appealed to the Supreme Court. However, if an appeal fails to satisfy certain conditions, the Supreme Court may reject such an appeal.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

- 31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Korea is a contracting state to numerous multinational environmental treaties and agreements, including the following.

Marine environment and fisheries

- the International Convention for the Prevention of Pollution of the Sea by Oil;
- the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter;
- the International Convention on Civil Liability for Oil Pollution Damage;
- the International Convention for the Prevention of Pollution from Ships;
- the United Nations Convention on the Law of the Sea; and
- the International Convention on Oil Pollution Preparedness, Response and Cooperation 1990.

Hazardous substances and wastes

- the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention);
- the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade;
- the Stockholm Convention on Persistent Organic Pollutants; and
- the Minamata Convention on Mercury.

Nature, fauna and flora

- the Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- the Convention on Biological Diversity;
- the Convention on Wetlands of International Importance Especially as Waterfowl Habitat;
- the International Plant Protection Convention;
- the Plant Protection Agreement for the South East Asia and Pacific Region;
- the International Tropical Timber Agreement; and
- the Cartagena Protocol on Biosafety to the Convention on Biological Diversity.

International treaties and regulatory policy

- 32 | To what extent is regulatory policy affected by these treaties?

Under article 6 of the Constitution, treaties duly concluded and promulgated under the Constitution shall have the same effect as the domestic laws of Korea. As such, Korea carries out its obligations under international agreements through the enactment of domestic laws, regulations and policies.

UPDATE AND TRENDS

Key developments of the past year

- 33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

Some recent developments relating to environment law in Korea are as follows.

- The Korean government is looking to implement RE100 and implemented the Renewable Energy Guarantees of Origin pilot project



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in late 2019. Going forward, the Korean government is expected to actively pursue the amendment of relevant laws and regulations, such as the Electric Utility Act to implement RE100.

- The recent amendment (effective as of 1 January 2020) to the Enforcement Decree of the Act on Resource Circulation of Electrical and Electronic Equipment and Vehicles has increased the number of electronic products subject to mandatory recycling.
- The proposed amendment to the Act on the Promotion of Saving and Recycling of Resources to implement the repackaging regulations to reduce excessive packaging is expected to become effective in January 2021.
- Recently, the Act on Transboundary Movement of Hazardous Wastes and their Disposal and its Enforcement Decree were amended to strengthen requirements, such as additional approval and reporting requirements for importation of plastic materials (PET, PE, PP and PS) to be imposed on waste importers.

Coronavirus

- 34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

No specific environment-related legislation or relief programmes went into effect following the outbreak of the unprecedented covid-19 pandemic. That said, considering the ongoing unexpected and uncertain economic impacts resulting from the pandemic, it is anticipated that companies will experience an increased number of claims related to covid-19 around the world, including Korea. As such, taking proactive steps to assess the applicable legal principles – such as force majeure, the doctrine of frustration of contract, and hardship – will help companies prepare for the financial and legal ramifications they may experience.

Spain

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LEGISLATION

Main environmental regulations

1 | What are the main statutes and regulations relating to the environment?

Spanish environmental law is governed primarily by the Constitution. Article 45 sets forth the right to enjoy an adequate environment for the development of the person, as well as the duty to preserve the environment. This article is also the basis for establishing sanctions for breach of environmental rules.

Below this, the basic rules of each of the 17 Spanish autonomous regions grant powers to the regional authorities on environmental matters. In addition, certain environmental powers are entrusted to the municipalities, mainly pursuant to Law No. 7/1985 on local government.

Following these basic rules, there are several statutes enacted by the Spanish state and autonomous regions on specific environmental matters. Among the basic statutes of the state, the following should be highlighted:

- Law No. 22/1988 of 28 July on Coasts;
- Law No. 11/1997 of 24 April on Packaging and Packaging Waste;
- Royal Legislative Decree No. 1/2001 of 20 July on Water;
- Law No. 37/2003 of 17 November on Noise;
- Law No. 1/2005 of 9 March regulating the greenhouse gas emissions trading scheme;
- Law No. 27/2006 of 18 July on the right to have access to information, public participation and access to justice in environmental matters;
- Law No. 26/2007 of 23 October on Environmental Liability;
- Law No. 34/2007 of 15 November on Air Quality and Atmospheric Environment Protection;
- Law No. 42/2007 of 13 December on Natural Heritage and Biodiversity;
- Law No. 40/2010 of 29 December on the geological storage of carbon dioxide;
- Law No. 2/2011 of 4 March on sustainable economy;
- Law No. 22/2011 of 28 July on Waste and Polluted Soils;
- Law No. 21/2013 of 9 December on Environmental Assessment;
- Royal Legislative Decree No. 1/2016 of 16 December on Integrated Pollution Prevention and Control;
- Organic Law No. 10/1995 of 23 November on the Spanish Criminal Code; and
- Royal Decree of 24 July 1889 on the Spanish Civil Code.

Autonomous regions may also enact regulations on environmental matters. Unless otherwise indicated, reference is made to state regulations only.

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

There is a system of integrated pollution control. Royal Legislative Decree No. 1/2016 on Integrated Pollution Prevention and Control applies to several categories of industries including, among others, combustion and chemical or waste management industries that meet certain parameters (the complete list is included in its Annex I).

Royal Legislative Decree No. 1/2016 provides for a single proceeding incorporating the most relevant environmental permits and other administrative steps in a single authorisation: the integrated environmental authorisation. The main aspects covered by this are air and water emissions, the production and management of waste and environmental impact assessments. Together with Royal Decree No. 815/2013 of 18 October on industrial emissions, Royal Legislative Decree No. 1/2016 implements the provisions of Directive 2010/75/EU, of the European Parliament and of the Council, of 24 November 2010, on industrial emissions.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

Law No. 22/2011 on Waste and Polluted Soils, and Royal Decree No. 9/2005 on the creation of a list of potentially land pollutant activities and the criteria to declare polluted soils, are the main rules governing soil pollution. They tackle activities that can potentially pollute the soil, the declaration of land as polluted and the clean-up obligations. Other rules that may also deal with soil pollution from a different perspective are Royal Legislative Decree No. 1/2016 on Integrated Pollution Prevention and Control and Law No. 26/2007 on Environmental Liability.

According to Law No. 22/2011, the autonomous regions shall declare, define and make an inventory of land that is polluted owing to the existence of dangerous components caused by humans.

The declaration of land as polluted, which is based on the concept of risk (for human health or the environment) and uses of the land, shall be made by the autonomous regions on the basis of the criteria set forth by Royal Decree No. 9/2005, and will require the carrying out of those activities necessary to clean up the soil. The persons compelled to carry out these activities are the polluters and, secondly, the non-occupying legal owners of the polluted land and finally the occupiers.

In addition, there are obligations to provide periodic information to the authorities regarding the potential pollution of the soil, as well as to disclose the fact that potential soil-polluting activities are or have been carried out in the public deed of transfer of rights over the soil in question.

Regulation of waste

4 | What types of waste are regulated and how?

Article 3(a) of Law No. 22/2011 defines waste as any substance or object that the owner disposes of or has the intention or obligation to do so. This general definition must be complemented with the concept of a by-product, as well as with the regulation on the conditions that certain specified waste must have in order to cease to be considered as waste, both of which are also included in the law.

More specifically, the law includes definitions of different types of waste. Hazardous waste is that which has hazardous characteristics listed in Annex III of Law No. 22/2011 and is listed as such by the European Union or national or regional regulations, as well as its packaging or receptacle. The treatment of hazardous waste is subject to specific authorisations and must fulfil special conditions of storage, labelling and packaging as well as strict documentary obligations. The production of hazardous waste is subject to prior communication to the relevant authorities. In addition, Law No. 22/2011 also refers to 'domestic waste', that is, the waste generated by domestic or similar-to-domestic activities (such as waste generated in offices), the collection of which is entrusted to the municipalities; 'commercial waste', that is, the waste generated by commercial activities, supermarkets, restaurants and the rest of activities included within the services sector; and 'industrial waste', that is, the waste generated within the production, transformation, use, consumption, cleaning or maintenance process of industrial activities.

Further to that general classification, certain types of waste are also subject to specific rules and regulations. This is the case, among others, for waste packages, waste from electrical and electronic equipment, waste from construction and demolition works, waste oils or waste batteries.

There is no legal definition of the circular economy in Spanish legislation. The Ministry for Ecological Transition has published, together with other public authorities and associations, the 'Spanish Strategy on Circular Economy'. The Strategy promotes, among other things, technological innovation in production processes, green public procurement, eco-design and use of the European environmental label.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

Law No. 34/2007 on Air Quality and Atmospheric Environment Protection refers to those activities considered as potential pollutants of the atmosphere. This regulation imposes emission limits for these activities, as well as other obligations such as self-control and keeping an official registry book on emissions. Certain activities must obtain a previous authorisation. In addition, limits on the concentration of certain pollutants in the air are also established.

Regarding the energy efficiency of buildings, Royal Decree No. 235/2013, of 5 April, on the procedure applicable to the energy efficiency of buildings certificate, should be mentioned. According to this rule, an energy efficiency certificate must be available to buyers or users of the buildings to obtain. The energy efficiency certificate of buildings proves that the building complies with the energy efficiency requirements as included in the Technical Building Code approved by Royal Decree No. 314/2006 of 17 March.

Also in relation to energy efficiency, Royal Decree No. 56/2016 must be considered. This rule introduces the obligation of making an energy audit for large companies, and groups of companies, as defined in the Decree itself. Energy audits must comprise at least the 85 per cent of the total final energy consumption of the company in Spain, including transportation, if applicable. It should take into consideration, whenever possible, profitability criteria in the life cycle cost analysis. The audit

must provide a reliable picture of the global energetic performance so that improvement measures may be identified.

Large combustion plants are subject to certain specific regulations on atmosphere emissions set forth in Royal Decree No. 815/2013, of 18 October, on industrial emissions and in Royal Decree No. 430/2004, of 12 March, establishing new regulations on limitations of atmospheric emissions from large combustion plants. Both rules include special emission limit values as well as the corrective and monitoring measures applicable to this type of plants. In the application of Royal Decree No. 430/2004, Spain approved a National Emission Reduction Plan for Existing Large Combustion Plants.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

Royal Legislative Decree No. 1/2001 on Water governs fresh water and its associated land (the hydraulic public domain). Pursuant to this rule, the use of water for private purposes from the hydraulic public domain is subject to obtaining the relevant concession granted by the Basin Authority. In addition, the performance of works affecting, or the discharge of wastewater into, the hydraulic public domain also requires the relevant authorisations granted by the Basin Authority.

Moreover, Law No. 22/1988 on Coasts governs seawater and its associated land (the maritime-terrestrial public domain). Pursuant to Law No. 22/1988 the use of, and works on, the maritime-terrestrial public domain is subject to the relevant administrative authorisation or concession. In 2013, Law No. 22/1988 was amended to introduce several new rules, in certain cases of a relevant nature, such as new criteria to define the maritime-terrestrial public domain.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

According to Law No. 42/2007 on Natural Heritage and Biodiversity, five basic types of protected natural spaces are regulated: parks, natural reserves, natural monuments, protected landscapes and protected marine areas, and each has specific protection measures.

As a general rule, activities in protected areas are restricted. Other rights may also be restricted where the protection of a natural space is at stake (subject in certain cases to the payment of an indemnity). For instance, the public authorities usually have a first right of refusal on plots within protected natural spaces.

According to European regulations and international treaties, other types of areas are protected in the Spanish territory. This is the case, for instance, for sites of community importance and special protected areas.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

Law No. 42/2007 governs the protection of wild flora and fauna species. As a general rule, destroying or disturbing protected wild species of flora and fauna is prohibited, as it is the possession or trade of such species. This regulation creates, inter alia, the list of wild species subject to a special protection regime; the inclusion of a species within the list entails certain restrictions concerning its possession, commercialisation and any other activity that may harm the species. The list also includes the catalogue of threatened species, which is distinguished by one of two categories (in danger of extinction and vulnerability) depending on the relevant type of threat, and provides specific protection measures for these categories.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

According to Law No. 37/2003 on Noise, state and local authorities shall approve noise maps establishing acoustic areas as well as maximum noise levels allowed for each area according to their prevailing use, which should be considered within the procedures for the granting of environmental permits. In this sense, Royal Decree No. 1367/2007, of 19 October, with regard to acoustic zoning, quality objectives and acoustic emissions, develops the aforementioned issues. For the purpose of Law No. 37/2003, 'noise' includes vibrations. There is no general rule specifically governing odours.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

Law No. 26/2007 on Environmental Liability implements Directive 2004/35/EC on Environmental Liability.

Law No. 26/2007 sets out an administrative liability regime according to which operators of activities causing environmental damage or imminent threat of environmental damage shall be held liable for such damage or imminent threat. This is a strict liability regime, except for the reparation of damage caused by activities not included in Annex III of the law, where fault is required. Operators are obliged to take measures to prevent the damage, to avoid new damage and to repair the damage already caused in the terms set out in this law.

Operators who carry out activities listed in Annex III of Law No. 26/2007 will be obliged to constitute a guarantee to secure their obligations arising from Law No. 26/2007.

Environmental taxes

11 | Is there any type of environmental tax?

Environmental taxes are not uncommon in Spain, even though there is no single rule governing them all. Taxes usually apply to water, waste and air emissions. For instance, Royal Legislative Decree No. 1/2001 on Water sets out, inter alia, a charge on wastewater discharges into the hydraulic public domain. The tax rate will depend on the authorised volume of wastewaters to be discharged. Likewise, Law No. 22/1988 on Coasts sets out a charge on wastewater spillages into the maritime public domain. The amount of this tax depends on the pollutant charge of the spillage.

Certain autonomous regions have developed specific environmental tax schemes and have established taxes on disposal of waste and air pollution, among other things. The taxable events and the criteria for the calculation of the tax depend on the regional legislation.

According to the Spanish regulations, as a general rule, the autonomous regions are not entitled to establish taxes that may affect to the same taxable event of other taxes established at national or local level. There is a legal discussion in Spain on the potential double taxation that could be caused by certain environmental taxes established by some autonomous regions. In fact, the Spanish Constitutional Court has declared that certain environmental taxes established by several autonomous regions are null because they overlap with the taxable event of local taxes on the property.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

Most regions have enacted their own legislation governing hazardous activities from the standpoint of protecting the environment and human health. As a general rule, and depending on the type of activity, hazardous activities require an environmental permit from the environmental authorities prior to the commencement of installation works, and, occasionally, a material verification from the same authorities confirming that the requirements imposed have been fully complied with. A communication must be filed prior to commissioning less hazardous activities. The legislation enacted by the autonomous region usually lists those activities required to obtain an environmental permit and the specific permit that is required. In general, a wide variety of activities is generally subject to obtaining an environmental permit or to environmental control.

In addition, pursuant to Decree of 17 June 1955 on Services from Local Authorities as amended by Law No. 17/2009 of 23 November on Free Access to Service Activities, municipalities may also subject the opening of activities to a municipal licence provided that it is regulated in the corresponding municipal ordinance and is aimed at verifying that the premises fulfil security and safety requirements as well as the relevant urban planning provisions.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

There are different regulations that provide a definition of 'hazardous substance'. Among others, and for the purposes of the protection of waters covered by the Royal Legislative Decree No. 1/2001 on Water, Royal Decree No. 817/2015, of 11 September, establishing criteria for monitoring and evaluating the status of surface waters and environmental quality standards, defines 'hazardous substance' as substances or groups of substances that are toxic, persistent and bioaccumulative, as well as other substances or groups of substances that involve a similar level of risk. In addition, Royal Legislative Decree No. 1/2016 considers as a 'hazardous substance' the substances or mixtures as defined in article 3 of Regulation No. 1272/2008/EC.

According to Royal Decree No. 840/2015, authorisation for the installation of activities that use certain hazardous substances is subject to several preventive conditions, such as the preparation of preventive policy plans, security reports or emergency plans.

Additionally, Decree No. 2204/1975 governs the use, storage and management of fuel and hydrocarbons and imposes certain conditions on the composition and usage of hydrocarbons.

With regard to chemical substances, Regulation No. 1907/2006/EC on Registration, Evaluation, Authorisation and Restriction of Chemicals sets out specific duties and obligations (eg, registration of substances with the European Chemicals Agency) on manufacturers, importers and downstream users of substances on their own, in preparations (defined in this Regulation as a mixture or solution composed of two or more substances) and in articles. The classification labelling and packaging of chemical substances and preparations are specifically governed by Regulation No. 1272/2008/EC.

Law No. 8/2010 of 31 March sets out the penalties applicable for any infringement of Regulation No. 1907/2006/EC concerning the registration, evaluation, authorisation and restriction of chemical substances and mixtures and for any infringement of Regulation No. 1272/2008/EC on the classification, labelling and packaging of substances and mixtures, which amended it.

In addition, at the state level, Royal Decree No. 255/2003 governs the classification, labelling and packaging of hazardous preparations, establishing the obligation to notify the administration of new preparations containing hazardous substances and to label and package preparations containing hazardous substances in accordance with certain conditions. The classification, labelling and packaging of hazardous substances are governed by Royal Decree No. 363/1995.

Finally, Royal Decree No. 258/1989, of 10 March, establishes general regulations on discharges of hazardous substances from land to the sea.

Industrial accidents

14 What are the regulatory requirements regarding the prevention of industrial accidents?

The main prevention measures concerning industrial accidents are set forth in Law No. 21/1992 on Industry. Pursuant to this, security regulations for the different types of industries must impose compulsory obligations to prevent industrial accidents. Furthermore, authorities may suspend or close any activity when a material risk for human health or for the environment is detected.

In addition, Royal Decree No. 840/2015 imposes on certain industries involving hazardous substances the obligation to define a risk avoidance strategy and to afford certain measures accordingly (such as to have a prevention plan).

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 What are the main environmental aspects to consider in M&A transactions?

The main environmental aspects to consider in a merger or acquisition are the following:

- the availability of the relevant environmental permits: in particular, the activity and operation licences, the water intake and wastewater discharge authorisations, the waste production and management authorisations and the integrated environmental authorisation are the most important environmental permits;
- compliance with the relevant environmental obligations: in particular, the most relevant obligations usually relate to emission limits and to waste management conditions;
- the existence of pollution in the soil and associated water; and
- the existence of administrative or judicial proceedings (existing or envisaged).

In terms of emission limits, it is important to note that certain industrial facilities need to purchase a specific amount of greenhouse gas (GHG) emission allowances to operate. Therefore, in this kind of transaction is important to verify that the facilities have obtained the relevant authorisation to emit GHGs, to establish that the amount of GHG emission allowances required every year have been obtained and to verify that the company has fulfilled its obligations of obtaining, registering and returning the GHG emission allowances. Otherwise, large penalties could be imposed and the functioning of the facilities could be affected.

In addition, it is imperative to verify whether the transaction is implemented by means of a share acquisition or an asset acquisition. The acquisition of shares entails that all environmental liabilities are assumed by the buyer. On the contrary, asset purchases may reduce the liabilities to be assumed by the buyer, but require the transfer or obtaining of all the permits to carry out the activity.

Environmental aspects in other transactions

16 What are the main environmental aspects to consider in other transactions?

In general terms, the environmental aspects to consider in mergers and acquisitions also apply to a wide variety of transactions.

In transactions regarding financing or capital markets, compliance with environmental obligations and the availability of the relevant permits to carry out the activity would be the most relevant concerns. In real estate transactions, soil and water pollution is the biggest issue in most cases. In corporate restructuring and bankruptcy proceedings it must be taken into consideration that if the activity is assigned to another entity, the relevant permits and concessions must also be transferred, and that the closure or dismantling of certain types of industries may be subject to specific environmental permits.

Environmental aspects in public procurement

17 Is environmental protection taken into consideration by public procurement regulations?

Yes. Law No. 9/2017, of 8 November, on contracts of the public sector includes certain provisions according to which the environmental protection must be considered when designing and awarding a public contract.

Pursuant to this rule, the administrative and the technical terms sheets of the public contracts must include those environmental protection conditions needed depending on the specific subject matter of the contract. These conditions must take into consideration the principles on environmental protection set forth in Royal Legislative Decree No. 1/2016.

The degree of fulfilment of environmental conditions in the offers submitted must be considered by the public authorities. Depending on the circumstances of the case, the contracting authority could exclude the offers that do not comply with the environmental requirements or grant a higher score in the tender to the offers that ensure more environmental protection.

Furthermore, bidders can include in their technical offers more stringent conditions on environmental protection that should be considered in order to award the contract.

Public contracts can also include certain special conditions of execution with the aim of ensuring that it is properly executed from the environmental protection perspective.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 Which types of activities are subject to environmental assessment?

Regulations on environmental assessment have been amended by Law No. 21/2013 on Environmental Assessment. Law No. 21/2013 unifies under a single act the provisions related both to the environmental impact assessment of projects and to environmental assessment of plans (that were previously governed by Royal Legislative Decree No. 1/2008 and Law No. 9/2006 on Environmental Assessment of Plans, respectively). Furthermore, Law No. 21/2013 introduces certain procedural amendments with the aim of simplifying the environmental assessment procedures.

Pursuant to Law No. 21/2013, certain projects within the following categories are subject to an environmental impact assessment: agriculture, mining, petrol, power generation, the steel and chemical industries, infrastructures, hydraulic works and waste management facilities.

In particular, projects listed in Annex I are unavoidably subject to an environmental impact assessment, whereas projects listed in article 7.2 are subject to a simplified assessment and would be subject to the

ordinary environmental impact assessment only if the relevant environmental authorities so decide on the basis of the criteria set forth in Annex III.

In addition, the plans and programmes prepared by public authorities listed in article 6.1(a) and (b) are subject to an environmental assessment. On the other hand, projects listed in article 6.1(c) and (d) would be subject to the environmental assessment only if the relevant environmental authorities so decide on the basis of the criteria set forth in Annex V. Furthermore, projects listed in article 6.2 would be subject to a simplified assessment.

Environmental assessments do not act as licences but as a prior and binding requirement to obtain a certain authorisation or resolution.

Note, however, that certain autonomous regions have substituted the obtaining of certain environmental permits (namely, activity licences) with the environmental impact assessment.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

The main steps of the environmental impact assessment procedure of projects are as follows:

- the promoter could optionally file a basic project proposal before the relevant authority, which will forward it to certain specific institutions to obtain their feedback in order to determine the scope of the environmental impact study;
- the relevant authority conveying feedback to the promoter;
- the promoter filing the project and the environmental impact study with the relevant authority;
- the public consultation;
- the amending (if necessary) of the impact study in view of allegations made during the public consultation; and
- the issuing of the environmental impact declaration by the environmental authority.

The main steps to be followed in the environmental assessment for plans and programmes are similar to those applicable to an environmental impact assessment.

Both environmental assessment proceedings are set forth in Law No. 21/2013 of 9 December on Environmental Assessment.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

In Spain, powers on environmental matters are shared between the state, the autonomous regions and the municipalities.

The state has the power to enact basic environmental legislation; in addition, the state has the power to control (ie, granting authorisations, sanctioning, etc) certain activities where more than one autonomous region is affected, namely, in relation to water, certain aspects of the greenhouse gas emissions regime and certain environmental assessments. State powers regarding the environment are generally executed through the Ministry for Ecological Transition.

Within that Ministry, certain subsidiary administrative bodies have been created with different responsibilities, such as:

- the Spanish Climate Change Office, in charge of setting out the national climate change policy;
- the General Directorate of Sustainability of the Coast and the Sea, in charge of the determination, protection and conservation of the maritime-terrestrial public domain; and

- the General Directorate of Biodiversity and Environmental Quality, in charge of the formulation of the national policy on air quality, prevention, reduction and control of pollution (including noise pollution), environmental assessment, waste prevention and management, etc.

The autonomous regions implement the applicable regulations and may issue additional rules for stricter environmental protection; in addition, they have the power to control many relevant areas related to the environment, such as integrated environmental authorisations. The regions' powers regarding the environment are exercised through bodies equivalent to state ministries.

Finally, municipalities also have powers concerning environmental protection, which must be executed in accordance with the regulations issued by the state and the autonomous regions. The main environmental powers of the municipalities relate to municipal environmental permits, urban waste and noise limits.

Investigation

21 | What are the typical steps in an investigation?

Any administrative investigation regarding a breach of environmental regulations is subject to the rules established under Law No. 39/2015 and Law No. 40/2015. The process usually starts with a complaint filed by a public officer or an individual. The examining officer then gathers and examines all available evidence. Finally, the relevant authority issues the resolution containing the sanctions imposed, should a violation be deemed to have been committed, or dismisses the complaint if no violation has been evidenced. The resolution can be appealed. Interested individuals or entities have the right to file allegations at any time before the final resolution is made by the relevant authority.

Administrative decisions

22 | What is the procedure for making administrative decisions?

The general procedure for making an administrative decision is set out in Law No. 39/2015 and Law No. 40/2015. The procedure commences with the request of an individual or an authority. Then all relevant facts and allegations are collected and examined. Finally, the decision is issued by the competent authority, which may be appealed as a general rule.

The parties have the right to be heard at any time before the decision is made and the right to propose evidence (such as documents, oral statements from witnesses or any other evidence allowed by law).

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

Sanctions and remedies that may be imposed by the regulator for violations are usually fines (in some cases, up to €1 million or even higher), the cessation of the activity, the closure of the premises, the publication of the penalty or the suspension or expiry of permits, a prohibition on contracting with the public sector, among others.

In addition to the sanctions imposed, the offender may also have to repair the damage caused.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

Any administrative resolution following an administrative proceeding may be appealed. Should there be a higher authority than the one that issued the resolution, an administrative appeal may be filed before that higher authority. If there is no higher authority, or if such an appeal has

already been dismissed, a jurisdictional appeal may be filed before the courts. In addition, it is possible (but not necessary), prior to appealing to the higher authority or to the courts, to appeal directly before the same authority that issued the resolution.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Environmental law proceedings take place in administrative, civil and criminal courts, depending, in each case, on the affected interests and the applicable regulations.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

In relation to infringements and breaches of environmental law, courts may confirm or quash any kind of administrative resolutions or acts, impose indemnities and, in criminal cases, impose imprisonment and other penalties.

As a general rule, upon request from the party concerned, the courts are allowed to suspend the administrative resolutions or acts challenged provided that the execution of the act or resolution can cause serious damage to the party and no damage to the environment or to a third party can derive from the suspension of the act or administrative resolution. If the suspension is granted, the courts can impose certain provisional measures to ensure the protection of the environment or the third party's interest.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Actions brought before a civil court should be based on damage or a contractual breach, but not on a mere breach of environmental regulations. Thus, civil claims regarding breaches and infringements of environmental law are allowed when such breach or infringement of environmental law causes damage or nuisance that may lead to a civil action.

Defences and indemnities

28 | What defences or indemnities are available?

According to the Spanish Civil Code, the general limitation period is five years for personal actions and there is a specific period of one year for non-contractual actions. Both individuals and legal entities may be civilly liable. Theoretically, civil liability is several and fault-based. However, in practice, judgments in case law tend to apply strict, joint and several liability when dealing with civil liability derived from an environmental issue.

Pursuant to the Spanish Criminal Code, the limitation period for basic environmental crimes is, in most cases, five years. Criminal liability may be applied to individuals and to legal persons. Criminal liability is fault-based.

Finally, according to Law No. 40/2015, except as otherwise specified, the limitation period for environmental administrative infringements is three years for very serious offences, two years for serious offences and six months for minor offences. Administrative liability may be applied to both individuals and entities and is fault-based. If more than one person is under an obligation, liability for the infringement is generally joint and several.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

In civil claims, the company may be held liable for the damage caused by a director or officer acting within the scope of the company's activity. The directors and officers of the company may also be held liable to the company itself, the shareholders and the company's creditors for any damage caused as a consequence of their negligent acts.

In the case of crimes committed within the scope of the company's activity, on behalf of the company or for its benefit, actions may be initiated directly against both the company itself and individuals that have committed the crime in question. Consequently, the company, together with the legal or de facto representatives of the company, may be held jointly and severally liable for the damage arising from the crime.

The Spanish Criminal Code includes a criminal liability exemption for the companies that have implemented effective crime prevention measures such as the criminal compliance programme.

In the case of offences committed by employees, the company will be exempt from criminal liability if, before the commission of the crime, it has adopted and effectively implemented an organisation and management model likely to prevent crimes of the same nature or significantly reduce the risk of their commission.

In the case of offences committed by company representatives, in addition to the requirement above, the company will be exempt from criminal liability if the following requirements are also met:

- the monitoring of the prevention model has been entrusted to a compliance officer or supervisory body with autonomous initiative and control powers, or to a corporate body legally entrusted with the supervision of the effectiveness of internal controls;
- the offender has committed the crime fraudulently avoiding prevention controls; and
- there has been no omission or oversight by the compliance officer or supervisory body.

With regard to administrative offences, the general rule is that the party liable is the company within whose authority the offence has been committed. Nevertheless, there are certain environmental regulations (such as the Law on Coasts and the Law on Industry) under which directors may be held administratively liable. Moreover, according to Law No. 26/2007 on Environmental Liability, persons other than the company may be held liable, for example, a person controlling the activity or with decisive economic power in the technical operation of the activity.

Appeal process

30 | What is the appeal process from trials?

First-instance judgments by civil courts may be appealed at second instance. Generally, judgments from administrative or criminal jurisdictions may be appealed, but pursuant to procedural rules, certain administrative matters may be resolved in a single instance without a possibility of appeal.

In some limited cases and complying with certain conditions, judgments ruled in a second or in a single instance may be appealed before the Supreme Court.

In certain cases, appeals may also be filed before the Constitutional Court when there is a violation of constitutional rights.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Spain is a contracting party to many relevant international treaties on the environment, including:

- the Paris Agreement, Paris, 2015;
- the International Convention for Tropical Timber, Geneva, 2006;
- the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, Aarhus, 1998;
- the Protocol to the United Nations Framework Convention on Climate Change, Kyoto, 1997;
- the United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa, Paris, 1994;
- the United Nations Framework Convention on Climate Change, New York, 1992;
- the Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 1992;
- the Convention on Biological Diversity, Rio de Janeiro, 1992;
- the United Nations Convention on Law of the Sea, Montego Bay, 1982;
- the Convention on the Conservation of European Wildlife and Natural Habitats, Berne, 1979;
- the Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979;
- the Convention for the Protection of the Mediterranean Sea Against Pollution, Barcelona, 1976;
- the International Convention for the Prevention of Pollution from Ships, London, 1973;
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, DC, 1973; and
- the Convention on Wetlands, Ramsar, 1971.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

International treaties are binding in Spain as soon as they are published in the state's Official Gazette. Therefore, regulatory policy is directly affected by these international treaties to the same extent as state or autonomous regions' regulations.

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

Spain is aligned with the other EU countries in environment-related issues, both in terms of legislation and enforcement. There is a complete set of environmental legislation that covers a wide range of environmental areas with a reasonable level of enforcement.

Spain transposed Directive (EU) No. 2019/904 on single-use plastics into its national legislation, as well as the four 'Circular Economy Package' Directives, which cover waste in general, the landfill of waste, and packaging and packaging waste, and which amend previous legislation relating to end-of-life vehicles, batteries and accumulators, and electrical and electronic equipment and their waste. Following this, the authorities are promoting several regulations aligned with the objectives of the circular economy with modifications on waste regulations.

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In relation to expected new legislation, a national law on climate change and energy transition has been announced (several autonomous regions have already adopted regional laws on the matter).

Coronavirus

34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

In general terms, the emergency legislation approved as a result of the covid-19 crisis has not significantly affected environmental regulations. The main environmental rules refer to sanitary waste production and management.

Nonetheless, as member state of the European Union, Spain is participating in the Next Generation EU recovery plan, which aims to address the damage caused by the pandemic and to encourage investment in a green, digital, social and more resilient European Union. It is expected, therefore, that part of the funds will be used to reach climate neutrality objectives.

United Kingdom

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LEGISLATION

Main environmental regulations

- 1 | What are the main statutes and regulations relating to the environment?

Environmental protection

The UK has a substantial body of environmental law and policy. This chapter discusses the main aspects of this area of law including planning, environmental permitting, hazardous substances, conservation, waste management and environmental liability. The key statutes and regulations relating to the environment are discussed in the sections below. They include:

- the Environmental Protection Act 1990;
- the Town and Country Planning Act 1990;
- the Planning Act 2008;
- the Environmental Permitting (England and Wales) Regulations 2016;
- the Environmental Damage (Prevention and Remediation) Regulations 2015; and
- the Water Resources Act 1991.

While there are many similarities in environmental law and policy across the UK, there is also variation between the laws of England, Scotland, Wales and Northern Ireland. This chapter focuses on the law in England and Wales unless otherwise specified.

UK environmental law has been heavily influenced by EU law and policy. EU Directives on environmental law are implemented through domestic secondary legislation, while EU Regulations relating to environmental matters are directly applicable in the UK.

In June 2016, the UK voted to leave the European Union (generally referred to as Brexit). Under the UK's Article 50 Withdrawal Notice, and as legislated in the European Union (Withdrawal) Act 2018, the UK originally intended to exit the European Union in March 2019. However, the UK extended the withdrawal date to 31 January 2020. The UK formally left the EU on 31 January 2020 and a transition period began immediately after that date, which is due to end on 31 December 2020. The substance of EU law will be retained in the UK via procedures in the European Union (Withdrawal) Act 2020, with the exception of the treaties and acts that were not binding on the UK before the Withdrawal Agreement came into force. The 2020 Act also states that changes to EU law will be legally binding in the UK during this transition period. Discussion of EU law below should be read with this in mind.

Human rights

One piece of relevant legislation that will remain after withdrawal from the EU is the European Convention on Human Rights (ECHR). The rights in this convention and their operation in the UK will remain unaffected by the UK's withdrawal from the EU.

The UK has ratified the ECHR and enshrined it in domestic law via the Human Rights Act 1998. Although the ECHR does not contain a specific right to a healthy environment, it does protect rights that can be related to environmental issues, including:

- the right to life under article 2 of the ECHR (which has been litigated in relation to issues such as dangerous industrial activities, exposure to nuclear radiation and natural disaster preparedness and protection);
- the right to respect for family life and home under article 8 of the ECHR (which has been litigated with respect to dam construction, industrial pollution, noise and access to environmental information); and
- protection of property under article 1 of Protocol 1 to the ECHR (which has been litigated with respect to issues such as expropriation or other impacts on property associated with developments).

Integrated pollution prevention and control

- 2 | Is there a system of integrated control of pollution?

The UK has a system of integrated pollution prevention and control, established through the Environmental Permitting (England and Wales) Regulations 2016 (SI 2016/1154) (the EP Regulations).

The Environmental Permitting (EP) regime provides a one-stop shop for environmental permits and covers activities that release emissions to land, water and air, or that involve waste. An environmental permit is generally required for a 'regulated facility' and for an activity discharging substances to surface water or groundwater. Conducting these activities without a permit is an offence.

Regulated facilities include a wide range of industrial installations, waste operations, mining waste operations, activities handling radioactive substances, activities that involve discharges to water or groundwater, small waste incineration plants, solvent emission activities, flood risk activities, medium combustion plants, and some small generators. There are some exemptions for facilities that pose a low risk to the environment.

The EP Regulations were amended in 2018 to incorporate new medium combustion plants into the regime, with a staggered entry process for existing medium combustion plants. These amendments also introduced controls on emissions of nitrogen oxides from diesel generators below 50MW capacity.

To obtain a permit under the EP regime, many industrial activities over certain thresholds will need to comply with best available techniques.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

Soil pollution and contaminated land issues are managed and addressed through several avenues, including local planning laws made under the Town and Country Planning Act 1990, the building consent process, the environmental permitting regime and Part 2A of the Environmental Protection Act 1990 (the Contaminated Land Regime).

Part 2A of the Environmental Protection Act 1990

The Contaminated Land Regime addresses 'unacceptable' levels of risk to land and is not intended to apply to normal levels of contaminants in the soil (naturally occurring contaminants or low-level, diffuse pollution and common human activity other than specific industrial processes).

Under this regime, local authorities are required to inspect their area and identify contaminated land. Authorities must take a risk-based approach to this process – considering the likelihood that harm to people or the environment, or pollution of water will occur and the scale or seriousness of such harm. Risk of harm is assessed based on the current use of the land in question.

Where contaminated land is identified, the enforcing authority must identify and serve a remediation notice on 'appropriate persons', requiring them to remediate the contamination, unless it is satisfied that appropriate remediation is being carried out voluntarily and within an appropriate time-scale. There are two classes of 'appropriate person':

- Class A persons – those who 'caused or knowingly permitted' the contaminating substance to be present in, on or under the land; and
- Class B persons – the current owner or occupier of the site (regardless of whether they are aware of the contamination).

Where it is not possible to identify an appropriate person for a particular site, the site may be classified as an 'orphan site'. In certain circumstances (eg, in an emergency, by agreement with the appropriate persons or where no appropriate person can be found), the enforcing authority is able to step in to carry out the necessary remediation. The enforcing authority is entitled to recover its reasonable costs from the appropriate persons if it steps in to carry out remediation.

Regulation of waste

4 | What types of waste are regulated and how?

Waste management law in the UK is heavily influenced by EU law. The EU Waste Framework Directive (Directive 2008/98/EC) is implemented in England and Wales through the EP regime and the Waste (England and Wales) Regulations 2011 (SI 2011/988). There is also a large volume of other EU waste directives and domestic regulations applicable to specific areas of waste management in the UK.

The definition of 'waste' in the EU Waste Framework Directive (adopted in the UK) is broad: 'any substance or object which the holder discards or intends or is required to discard.'

There are several categories of waste, some with specific legal regimes. The main category is 'controlled waste' (household, industrial or commercial waste). However, additional regulations and regimes are also in place to manage specific types of waste such as hazardous waste; packaging waste; waste batteries; end-of-life vehicles; mining waste and radioactive waste.

A permit under the EP Regulations and planning permission may be required for activities related to the use, recycling, treatment, storage or disposal of waste. Businesses and organisations will also need to comply with the overarching legislative requirements: the duty to apply the waste hierarchy and the waste duty of care.

The waste hierarchy is:

- prevention;
- reuse;
- recycling;
- other recovery (eg, energy recovery); and
- disposal as a last resort.

The Environmental Protection Act section 34 imposes a duty of care on anyone handling controlled waste (with a more limited application to householders concerning domestic household waste) to take all reasonable steps to ensure that the waste:

- is not disposed of unlawfully, or treated, kept or disposed of in a way that causes pollution or harm;
- does not escape from a person's control;
- is only transferred to an authorised person; and
- is accompanied by a waste transfer note in the proper form.

There are also separate duties attached to certain other types of waste – for example, extractive waste from mining and quarrying works.

Failure to comply with the duty of care is an offence. It is also an offence to carry out regulated activities (which include waste activities) under the EP Regulations without an environmental permit and to deposit controlled or extractive waste without a permit or in breach of a permit (section 33 Environmental Protection Act). Treating, keeping or disposing of controlled waste or extractive waste in a manner likely to cause pollution or harm to human health is also an offence.

On 4 July 2018, four EU waste directives came into force, which introduce amendments that aim to implement circular economy reforms. The amendments introduce targets for the recycling of municipal and packaging waste, and reduction targets for waste being sent to landfill. The UK government has expressed general support for these EU legislative reforms. It adopted 'Our Waste, Our Resources: A Strategy for England' in December 2018. This strategy aims to encourage the growth of the circular economy and the reduction of waste. For instance, it sets out that producers will pay the full costs of disposal for any packaging they place on the market. Minimum design requirements will also be adopted to encourage resource efficient product design. However, despite these policy initiatives, there has not yet been any formal legislative change to implement a circular economy in the UK.

The deadline for the EU directives to be implemented into national laws was 5 July 2020. However, according to statistics from the European Environmental Bureau, in June 2020 only five governments officially reported progress on the national transposition of the EU's waste directives. As the UK has now left the EU, it has not reported on the implementation of the EU waste directives. Other countries have stated they will need more time to comply with the new directives, citing the covid-19 crisis as one of the causes for this delay.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

There is legislation governing both ambient air quality and point source pollution in the UK.

Emissions to air from activities such as industrial installations are regulated through environmental permits under the EP Regulations. Permits will often contain limits and other conditions for emissions of substances such as sulphur dioxide, nitrogen oxides, carbon monoxide and particulates, with additional requirements imposed on large combustion plants.

Air quality law and policy in the UK flows from various pieces of EU legislation. However, the UK's implementation of the EU law through Air Quality Plans has been subject to repeated court challenges. In 2018,

the High Court ruled that the government's revised July 2017 air quality plan was unlawful and insufficient to ensure that the UK complies with EU air quality limits. In response, the government directed 33 local authorities to carry out studies in 2018 to determine measures to reduce nitrogen dioxide air pollution in their areas. The government published a supplement to the UK Air Quality Plan in October 2018.

The Environment Act 1995 requires local authorities to review air quality in their areas and enforce the air pollution standards set in a 'National Air Quality Strategy'. The UK Clean Air Strategy was published in 2019. The Clean Air Strategy contains high-level policy direction and standards regarding air quality and emissions from transport, farming, industry and domestic sources. The Strategy also sets out the UK commitment to include legislation on clean air in the Environment Bill. The Bill introduces a duty on the UK government to set two air quality targets by October 2022:

- reduce the annual average of fine particulate matter in ambient air; and
- set a long-term air quality target for a minimum of 15 years in the future, which will encourage long-term investment.

The National Planning Policy Framework also states that when preparing local plans, local authorities should aim to minimise pollution, including air pollution. Air pollution is covered by the statutory nuisance regime in the Environmental Protection Act, which covers nuisances resulting from air pollution (eg, smoke, fumes, gases, dust or smells). The Environmental Protection Act also imposes a duty on local authorities to inspect their areas, serving abatement notices where necessary. The common law of nuisance will also apply to certain air emissions.

Air pollutants are regulated through bans on certain substances (eg, chlorofluorocarbons) and specific restrictions for substances such as fluorinated greenhouse gases (F-gases) and persistent organic pollutants, as well as carbon reduction commitments.

The UK currently participates in the EU Emissions Trading System (EU ETS) and has implemented legislation and policy aimed at addressing greenhouse gas emissions. It should be noted that, from 1 January 2019, the European Commission suspended the UK from auctioning allowances, issuing any free allowances or exchanging international credits under the EU ETS, because of the UK's intention to formally exit the European Union. As the UK left the EU on 31 January 2020, it will remain compliant with the EU ETS until the end of the transition period, lasting from February to December 2020. Following its exit, the UK will need to ensure that it meets its international climate change commitments independently of the EU ETS.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

The EU Water Framework Directive (Directive/2000/60/EC) integrates the management of surface water bodies and groundwater. The Directive requires that all surface water bodies are to achieve 'good ecological status' and 'good chemical status' by 2015. However, there are separate, lower standards for heavily modified and artificial water bodies and standards that are more specific for protected areas such as drinking water abstraction areas, habitat protection areas, recreational waters and nutrient-sensitive areas. No water body should be permitted to deteriorate in status from one class to another. The EU Water Framework Directive will only be applicable to the UK legal regime until the end of the transition period (31 December 2020).

The main implementing regulations for the Water Framework Directive are the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (SI 2017/407), with cross-border river basin districts provided for in special, separate regulations.

Discharges to water are also regulated via the EP regime. No person may cause or knowingly permit a water discharge activity or activity affecting groundwater without an environmental permit, nor may a person operate a facility that involves discharges to water without a permit. This regime therefore covers water discharges as part of regular operations and one-off accidents or spills.

The Water Resources Act 1991 contains additional domestic provisions relating to water abstraction, management and pollution control.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

There are national parks and other kinds of protected areas designated across the UK.

In England, portions of the countryside have been given protection under the National Parks and Access to the Countryside Act 1949. The national parks designation provides protection via statutory requirements to conserve and enhance the natural beauty, wildlife and cultural heritage of these areas and to promote opportunities for public understanding and enjoyment of these areas (although, conservation takes precedence).

In the UK, sites may also be designated as Areas of Outstanding Natural Beauty (AONB) under the Countryside and Rights of Way Act 2000. All decisions on development proposals that may affect an AONB must have regard to the purpose of conserving and enhancing the natural beauty of the AONB.

The planning regime under the Town and Country Planning Act also provides for specific rules in local areas relating to landscape protection and the landscape impacts of proposed activities and developments. Note that planning decisions taken by local authorities must take into account the National Planning Policy Framework (NPPF), the latest version of which was published in February 2019, and which contains a chapter dedicated to conserving and enhancing the natural environment.

Town and village greens can also be registered and protected under the Commons Act 1857 and subject to a specific regime for management and protection.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

There are several overlapping national, EU and international habitat and species protection regimes applicable in the UK.

The key EU-level protections come from the Habitats Directive (Directive 92/43/EEC) and Birds Directive (Directive 2009/147/EC) – often collectively described as the Natura Directives. These Directives require measures protecting certain habitats, species and wild birds of European importance. Any plan or project that is likely to have a significant effect on a protected site must be assessed and, if the plan or project receives a negative assessment and there is no alternative solution, it can only be undertaken if it is for 'imperative reasons of overriding public interest'. The Natura Directives are implemented through several UK regulations, in particular the Conservation of Offshore Marine Habitats and Species Regulations 2017 and the Conservation of Habitats and Species Regulations 2017.

There are also national designations for nature conservation, such as Sites of Special Scientific Interest (SSSIs) under the Wildlife and Countryside Act 1981. An SSSI may be designated due to the flora or fauna present, or the geological make-up or physiography of the area. SSSIs will usually have a management agreement or management scheme in place that will govern the kinds of activities permitted in the

area. Other forms of protection for habitats and species include designations of National Nature Reserves or Local Nature Reserves, and Limestone Pavement Orders.

In the marine environment, there are two kinds of marine protected areas:

- marine sites designated under the Natura Directives for the protection of habitats and species, known as European Marine Sites; and
- Marine Conservation Zones (MCZs) established under the Marine and Coastal Access Act 2009. Scotland and Northern Ireland have separate marine protected area regimes, although there are many similarities and overlaps with the regime in England and Wales).

The Marine Strategy Framework Regulations 2010 provide additional protection for marine flora and fauna species and require the pursuit of 'good environmental status' and an 'ecosystem-based approach' to the management of human activities in the marine environment.

The UK has ratified several international treaties relating to biodiversity protection and has designated protected areas or additional statutory protections pursuant to these international regimes. In particular, the UK has over 100 wetland sites designated under the 1971 Convention on Wetlands of International Importance (Ramsar Convention). Another example of the influence of international treaties can be found in section 40 of the Natural Environment and Rural Communities Act 2006, in which public bodies have a duty to have regard to the purpose of conserving biological diversity in accordance with the 1992 Convention on Biological Diversity, so far as is consistent with the proper exercise of their functions.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

The EP regime manages noise, odour and vibrations through environmental permits for regulated activities. Local planning rules and planning permissions also address these matters and may set limits for their relevant areas. The UK also has legislation governing health and safety and labour conditions relating to exposure to noise and vibrations.

More generally, noise, odour and vibration are common kinds of nuisance and are addressed in the UK through the statutory nuisance and common law nuisance regimes.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

There are numerous avenues through which both civil and criminal liability can be imposed in the various statutory regimes dealing with particular environmental matters. For example, the wildlife protection regimes contain offence provisions, as do the waste, water and EP regimes. Liability regimes also exist for specific activities such as mining and oil and gas activity.

Many environmental offences are strict liability offences. In such cases, liability is not based on fault or intention. In several statutory regimes, liability for environmental damage is imposed on the person who 'causes or knowingly permits' damage. Liability can also fall upon landowners or occupiers regardless of whether they caused or permitted the acts causing the damage.

Under the EP regime, it is a criminal offence to operate without a permit. Similarly, failure to comply with the conditions of a permit will also incur criminal penalties. However, the enforcing authority may also issue non-criminal sanctions such as enforcement or suspension notices, breach of which would also constitute an offence. These enforcements are, for the most part, issued by the Environment Agency.

The Environmental Damage (Prevention and Remediation) Regulations 2015 in England and Wales imposes liability for more serious environmental harm. The courts have held that 'environmental damage' means 'a measurable deterioration of the environmental situation' of protected species or natural habitats, surface or ground water, and land. The environmental liability regulations impose criminal liability and also empower regulators to require the relevant operator to take immediate preventive action, report an imminent threat to regulators, and carry out remedial measures.

The statutory nuisance regime is set out in Part 3 of the Environmental Protection Act. The Act sets out the categories of activities that can amount to statutory nuisance that unreasonably interferes with the use or enjoyment of another person's home or other premises. Local authorities implement and enforce statutory nuisance provisions by inspecting, investigating complaints, and issuing abatement notices. Breach of an abatement notice is a criminal offence and can be prosecuted summarily.

The common law nuisance regime provides for civil causes of action in tort in cases of public and private nuisance. Private nuisance is caused by a person undertaking an activity or using their land in a way that encroaches upon a neighbour's property rights (eg, producing noise, odour or spills). A claimant can seek compensation for actual physical damage or loss of enjoyment of their property, to the extent that the damage was reasonably foreseeable. Public nuisance arises from an act that endangers or obstructs the public in the exercise or enjoyment of common rights, for example, obstruction of a highway. Public nuisance proceedings are rare, as the statutory nuisance or other statutory regimes often provide a more straightforward and effective remedy.

Environmental taxes

11 | Is there any type of environmental tax?

The UK government levies taxes on energy production and energy products (eg, climate change levy, fossil fuel levy, tax on hydrocarbon oils), which make the largest contribution to government revenue from environmental taxes. Transport taxes also apply, covering the ownership and use of motor vehicles (in particular, new diesel taxes are in force as of April 2018). Finally, there are taxes imposed on the extraction of raw materials (eg, aggregates levy and minerals royalties) and on the management of waste (eg, taxes on landfills).

The Finance Act 2019 contains several provisions relevant to environmental taxes, including:

- a tax exemption for vehicle battery charging at the workplace to remove any liability for income tax arising from the provision of charging facilities for employees;
- an exemption from vehicle excise duty for taxis capable of zero emissions;
- a lower rate of heavy goods vehicle road user levy for vehicles that meet the latest Euro 6 emissions standard; and
- an exemption from the climate change levy for mineralogical and metallurgical processes – to ensure that this exemption remains operable after the end of the transition period on 31 December 2020.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

The EU Seveso III Directive aims to prevent major accidents caused by dangerous substances and limits the consequences of any accident that does occur. It is implemented in the UK through separate regimes in Scotland, Northern Ireland, England and Wales.

In addition to any applicable permits required under the Environmental Permitting regime, hazardous substances are subject to a separate permit regime in England and Wales. The Planning (Hazardous Substances) Act 1990 generally requires consent from the relevant Hazardous Substances Authority (in most situations, this is the local planning authority) to hold hazardous substances above certain thresholds. It is a criminal offence to hold hazardous substances on, under or over land without a hazardous substances consent (unless the quantity held is below the statutory threshold or falls within an exception), to hold hazardous substances in excess of the quantities permitted by a consent or to breach consent conditions.

The Health and Safety Executive (HSE) is tasked with preventing work-related death, injury and ill-health in England, Wales and Scotland. The HSE sets a 'consultation distance' around sites with hazardous substances consents – marking the area that the HSE regards as at risk from the activities carried out at the site or from the materials held or used on the site. Any applications for planning consent within the consultation distance must be submitted to the HSE.

In addition, any business that manufactures, stores or uses any dangerous substances in bulk amounts exceeding certain threshold quantities is subject to the Control of Major Accident Hazards Regulations 2015 (SI 2015/483) (COMAH). The COMAH regime applies predominantly to chemical- and petrochemical-related activities, fuel storage facilities and fuel distribution. Activities such as storage of gas, large warehouses and distribution facilities, and the manufacture and storage of explosives may also be captured.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

In addition to the regulatory regimes applying to hazardous activities, there are laws in the UK governing hazardous products and substances.

The EU Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (EC 1907/2006) (the REACH Regulation) has direct effect in member states, and this will include the UK until the end of the transition period on 31 December 2020. The UK has implemented certain elements of the REACH Regulation through national legislation, such as the REACH Enforcement Regulations and the REACH (Appointment of Competent Authorities) Regulations 2008. The REACH Regulation imposes obligations on UK-based manufacturers and importers of chemical substances. It also imposes obligations on downstream users, including distributors, retailers and professional users of products in the EU, taking a risk-based approach, with more onerous requirements and scrutiny attached to more high-risk substances. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (the REACH EU Exit Regulations) have introduced amendments to the REACH Regulation, as applicable in the UK, to introduce a domestic regulatory framework for chemicals regulation that is broadly similar to the EU framework. The REACH EU Exit Regulations came into effect on the UK's exit day from the EU. The European Union (Withdrawal) Act 2020 defines the exit day as 31 January 2020 at 11.00pm.

Employers are required to control substances that are hazardous to health and prevent or reduce their workers' exposure to such substances under the Control of Substances Hazardous to Health Regulations 2002 (SI 2002/2677). Under these regulations, all employers are required to carry out assessment of the risks to the workforce, contractors, visitors and customers caused by hazardous substances and prevent or adequately control those risks.

The UK has specific laws on the control of asbestos, relating to the use, management and removal of asbestos in non-domestic premises.

There is also separate regulation for the use of hazardous substances (such as lead, mercury and cadmium) in the components of electrical equipment and for product classification and labelling.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

The Health and Safety at Work etc. Act 1974 sets out general duties that employers owe employees and, in certain circumstances, other persons. It also imposes duties on employees. This legislation is supplemented by a significant volume of regulation, codes of practice and guidance. The HSE is the main regulatory body in this area and also carries out prosecutions. The range of health and safety obligations imposed upon employers is extensive – these include assessing and reviewing work-related risks faced by employees, making appropriate arrangements for preventive and protective measures, and auditing the adequacy of company procedures.

Directors, company secretaries or managers can be held individually criminally liable for health and safety offences. In addition, the UK has corporate manslaughter and homicide laws in place.

The COMAH regime also applies to prevent major accidents in the workplace.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

Environmental issues are relevant in almost every M&A transaction.

The extent and complexity of the issues in each case will depend on the target and nature of the deal (eg, whether it is an acquisition of shares or assets). The target business should be properly investigated during the due diligence process to determine the extent of its environmental impacts, the level of compliance and future compliance requirements, and any liabilities or potential liabilities. Warranties, indemnities and other contractual terms are likely to be necessary to apportion and manage the risk between the parties.

In a share sale, the buyer normally acquires the risk of any environmental liability associated with the target company. This could include liability for pre-completion polluting activities, non-compliance with permits, contamination on properties owned or occupied by the target, liabilities incurred via joint ventures, or contracts.

In an asset sale, the buyer will usually have a greater level of protection and will not assume liability for actions of the operating company. However, asset purchasers may still assume or incur liability for contaminated land or water pollution relating to the land or asset being acquired and any compliance issues related to the asset (eg, issues that may affect compliance with permits, or liability for clean-up or remediation, as the new owner or occupier of land).

In brief, the main environmental aspects to consider in M&A transactions are:

- the nature of the business to be acquired, including any actual or potential impacts it may have on the environment;
- the permits held or required to be obtained;
- any environmental liabilities incurred by the business (historic and current);
- any claims by third parties or investigations by regulators;
- any upgrade works required;
- potential future changes to environmental or planning laws that may affect operations;

- the systems and policies that the business has in place to manage its environmental impacts;
- the land that is the subject of the transaction and its status (ie, whether it is contaminated, subject to environmental protections, or subject to planning obligations or restrictions);
- whether an indemnity, warranty or other contractual condition should be sought from the seller; and
- whether environmental insurance should be obtained.

Environmental aspects in other transactions

16 What are the main environmental aspects to consider in other transactions?

Environmental aspects arise in many corporate transactions, not only M&A deals.

In financing transactions, environmental policy, regulation or liability may affect the borrower's creditworthiness or reduce the value of any security. Due diligence will be essential to assess and manage any environmental risks in the transaction. Lenders may require a borrower or sponsor to provide guarantees or other forms of security for environmental obligations and in some circumstances lenders may be directly exposed to liability associated with the assets in question. Some lenders may also have requirements relating to environmental and social matters that they wish to build into the financing documents. For example, if the institution in question has signed up to the Equator Principles or the International Finance Corporation's Performance Standards on Environmental and Social Sustainability.

Initial public offerings or mergers may also require consideration of environmental issues. The UK Companies Act 2006 imposes requirements on some large listed companies in terms of disclosure of non-financial matters. These reporting obligations require disclosure of issues such as the company's impact on the environment, carbon emissions and steps taken to address environmental issues associated with the business. Quoted companies, large unquoted companies and large limited liability partnerships must also disclose energy intensity metrics, information about the previous year's energy use and GHG emissions, energy efficiency actions and details of methodologies used in reporting.

Environmental issues are highly relevant to real estate transactions. The appropriate checks should always be carried out to investigate the environmental laws applicable to the site in light of the purchaser's intended use of the property as well as any restrictions arising through planning laws, conservation laws, cultural heritage laws or relevant permit conditions. The nature of environmental protections or operations on neighbouring sites may also be relevant.

Insolvency proceedings can also raise environmental issues, particularly if the company in question has outstanding obligations required by environmental permits or if it has unaddressed compliance issues, liabilities or claims against it. In particular, site remediation or decommissioning issues may arise in this context.

Environmental aspects in public procurement

17 Is environmental protection taken into consideration by public procurement regulations?

In England and Wales, most public procurement contracts are governed by the Public Contracts Regulations 2015 (SI 2015/102). There are also separate specific regulations governing procurement in areas such as utilities contracts.

Public contracting authorities shortlist applicants by setting selection criteria. The authority must exclude a candidate that it knows has been involved in certain criminal offences (eg, relating to proceeds of crime, fraud, bribery and corruption, violation of the Modern Slavery Act 2015)

or where there is proof of non-payment of taxes. In some cases, these kinds of offences may be connected to breaches of environmental law.

The Public Contracts Regulations 2015 also entitle authorities to exclude a candidate from further participation at their discretion. One of the grounds on which this can be done is violations of environmental, social and labour laws and commitments arising under certain international treaties (eg, those dealing with forced or child labour).

Further, environmental and social aspects may feature as award criteria for the full tender, although all award criteria must still be linked to the subject matter of the contract in question.

The Public Services (Social Value) Act 2012 also requires contracting authorities to consider how the services they intend to procure 'might improve the economic, social and environmental well-being' of the area in which the services are to be provided.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 Which types of activities are subject to environmental assessment?

In England, the general environmental impact assessment (EIA) process is governed by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017/571. Similar requirements are also in place for Wales pursuant to the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (SI 2017/567). For certain developments of a particular scale and impact (eg, crude oil refineries, thermal power stations and other large combustion installations) an EIA will always be required. For other developments, an EIA may be required if the development in question is in a sensitive area and meets certain criterion or exceeds certain thresholds.

Additionally, there is a distinct regime in the UK implementing EU law on strategic environmental assessment (SEA) (Directive 2001/42/EC). SEAs involve assessment of governmental plans and programmes at a strategic level, rather than the assessment of individual projects.

Environmental assessment process

19 What are the main steps of the environmental assessment process?

The following process applies to EIAs required as part of the planning process:

- the developer seeking to undertake a project is responsible for undertaking an EIA;
- if a developer is unsure whether their development requires an EIA, they can ask the relevant planning authority for a screening decision;
- planning authorities can also make determinations as to the issues to be covered in a particular EIA at the request of the developer (known as a scoping opinion);
- the EIA is then prepared and submitted alongside the planning application – the authority will take account of the EIA when considering the planning application and there will be an opportunity for members of the public and other statutory bodies to comment on the impacts of the development; and
- the authority will make its decision and publish it, including its reasons and any mitigation measures required to avoid, reduce or offset the development's environmental impacts.

Specific EIA requirements and regulations apply in other situations such as the marine licensing regime, with variations in the applicable procedure.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

There are several authorities responsible for environmental management and regulation in the UK.

In England and Wales, the Environment Agency and Natural Resources Wales have primary responsibility for environmental law enforcement and regulation. There are also many specialist regulators such as Natural England (the governing body for protected sites), the Marine Management Organisation (responsible for marine licensing and regulation), and the Health and Safety Executive.

In Scotland, the Scottish Environmental Protection Agency is the principal environmental regulator. As with England and Wales, there are a number of specialist regulators in Scotland as well, including Marine Scotland and Scottish Natural Heritage.

In Northern Ireland, the Northern Ireland Environment Agency is the main environmental regulator.

Some regulators have UK-wide mandates, such as the Oil and Gas Authority.

Local authorities are responsible for local planning laws and planning consents, statutory nuisance, air quality management, and they have primary responsibility for the contaminated land regime.

Investigation

21 | What are the typical steps in an investigation?

Local authorities have general investigative powers to inspect their area for statutory nuisances and to investigate potential contaminated land. Inspections of these and other matters, such as periodic review of permit compliance, are done taking a risk-based approach.

The Environment Agency carries out investigations of serious environmental incidents. It has broad powers to conduct investigations, including power of entry, examination and investigation, powers to take measurements, photographs and samples, powers to request information and require production of documents or records. Refusal to cooperate is a criminal offence. The statute contains notice procedures and other checks on the exercise of these powers.

Administrative decisions

22 | What is the procedure for making administrative decisions?

The applicable administrative process for decision-making on environmental matters will be highly fact-dependent. These processes can differ depending on the subject and the type of decision. Many of the statutory regimes in place outline specific procedures.

Permitting decisions are subject to statutory appeal processes. The Planning Inspectorate or the Environment Agency deals with most planning and permitting appeals, including appeals of enforcement notices. Planning Inspectorate decisions can, in turn, be appealed to the High Court.

In general, as well as any specific procedure set out in statute, administrative decisions can be challenged in the UK through the judicial review process.

As well as procedures for specific administrative decisions, the Environmental Information Regulations 2004 (SI 2004/3391) require public authorities to provide the public with access to environmental information and introduce a presumption in favour of disclosure. However, authorities may refuse requests for information in certain circumstances.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

Not all breaches of environmental legislation will constitute an offence. In some circumstances (particularly in the case of low-level or first-time offending), a regulator may take lesser interventions such as providing advice and guidance or issuing warnings.

There is a broad range of sanctions and remedies available in the UK for breaches of environmental law, including:

- imposition or variation of conditions on permits;
- requirements for developers to provide compensation or security to ensure financing for activities such as site remediation;
- enforcement notices, stop notices, compliance notices and works notices;
- non-compliance penalty notices;
- suspension or revocation of environmental permits;
- prohibition notices;
- injunctions;
- step in and cost recovery powers for regulators to carry out remedial works themselves;
- civil sanctions including monetary penalties, fines and enforcement undertakings; and
- criminal sanctions including formal caution, prosecution, fines, ancillary orders following conviction including disqualification of a director, confiscation of assets, forfeiture of equipment, compensation order or remediation order.

The Sentencing Council for England and Wales has published sentencing guidelines that recommend penalties dependent on factors such as an organisation's size, the category and scale of offending, and individual culpability.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

Many statutes set out specific procedures for appealing regulators' decisions. Generally, civil fines or notices issued by a regulator are appealed to the General Regulatory Chamber of the First-tier Tribunal and the Planning Inspectorate hears appeals of permitting decisions or notices issued by local authorities. Criminal enforcement action can be appealed via either criminal court processes or statutory processes. The lawfulness of an administrative decision can also be challenged via judicial review.

Rights of appeal are subject to time limitations and specific grounds in some cases.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Environmental law proceedings can be brought in civil, criminal and administrative courts in the UK. The forum will depend on the matter at issue in the proceedings.

Judicial review proceedings in the administrative court are also available to challenge environmental decision-making and may be used in the absence of other avenues or if other remedies have been exhausted.

Judicial review proceedings must be brought within strict time limitations and can only challenge the manner in which a decision was made, not the substantive merits of the decision itself.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

The courts have broad powers in relation to breaches of environmental law.

In cases of criminal offences, courts will commonly issue fines. They also have powers to make compensation orders and may order confiscation of property. In cases of the most serious offending, the courts have powers to sentence individuals to imprisonment. When deciding on appropriate sanctions the courts will consider a range of mitigating and aggravating factors and will follow the sentencing guidelines for environmental offences set out on the Sentencing Council's website.

In a civil claim, the usual remedy will be damages to the injured party, although the courts can also grant injunctions.

In judicial review proceedings, courts can make orders quashing a decision, requiring a decision maker to reconsider its decision, or prohibiting certain action. Courts can also make declarations clarifying the law or clarifying the rights or obligations of the parties to the proceedings.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Contractual claims may arise regarding infringements of environmental law, if that infringement triggers a breach of warranty or other term or condition in the contract. Contracts may also contain indemnities for environmental liability, which could become the subject of a civil claim.

Civil claims can be brought in tort in situations of common law nuisance and under the statutory nuisance regime. The usual remedy is damages, although courts are also able to grant injunctions.

Defences and indemnities

28 | What defences or indemnities are available?

Liability for environmental damage can arise from a number of sources.

In cases involving strict liability, defences may be limited. Where the offence in question is governed by a specific statutory regime, there may be particular defences available through that legislation.

It will be a defence to a statutory nuisance claim if the defendant can show it has used 'best practicable means' to prevent or counteract the effects of a statutory nuisance. However, this defence is subject to a number of limitations set out in the Environmental Protection Act. There are also some potential defences to common law nuisance, for instance if the nuisance was caused by an 'act of God'. However, planning permission or an environmental permit will not, in and of itself, constitute a defence to a nuisance claim. It is also not generally a defence to argue that the claimant 'came to the nuisance' by acquiring or moving to their property after the nuisance had started.

There are no statutory indemnities under UK law. Indemnities in contracts can provide remedies in the case of costs incurred due to another party's illegal acts. However, contractual indemnities will not be enforceable if they purport to indemnify a party against the consequences of its own deliberate criminal actions.

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

Directors will not normally be liable for the acts or omissions of a company in the ordinary course of business.

However, a director can personally commit and be liable for an environmental offence. Additionally, under several pieces of environmental

legislation, directors or company officers can be held liable if an offence committed by the company was done with their consent or connivance or can be attributable to the director or officer's neglect (more common in situations of small companies where directors are closely involved with the running of the company). In many cases, multiple parties can be held jointly and severally liable for environmental damage.

Companies may choose to indemnify directors in respect of proceedings brought by third parties for environmental damage.

Appeal process

30 | What is the appeal process from trials?

Specific statutory regimes may dictate particular avenues or procedures for appeal or challenge.

Generally, in a civil matter, the appellant will first make an application to the court that made the decision subject to the appeal. If permission is declined, permission to appeal can be sought from the relevant appellate court. The substance of an appeal may sometimes be restricted, for example in some instances appeals may only be allowed on a point of law or against the remedy granted, rather than allowing for a full reopening of the case.

Decisions of planning authorities can be reviewed in the Planning Court, a specialist court within the Queen's Bench Division of the High Court of Justice. Appeals from the High Court can be made first to the Court of Appeal and finally to the UK Supreme Court.

In the criminal courts, the right of appeal depends on the original plea. If a defendant pleads not guilty, they have the right to appeal to a higher court against conviction and sentence. If a guilty plea was entered, the defendant can generally appeal their sentence only.

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

The UK is a party to a number of international environmental treaties. Some key treaties ratified by the UK include:

- the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters 1998;
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973;
- the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) 1992;
- the United Nations Convention on the Law of the Sea 1982;
- the Convention on Biological Diversity 1992;
- the Convention on Environmental Impact Assessment in a Transboundary Context 1991;
- the United Nations Framework Convention on Climate Change, the Montreal Protocol on Substances that Deplete the Ozone Layer 1987 and the 2015 Paris Agreement on Climate Change;
- the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal 1989; and
- the Convention on Long-range Transboundary Air Pollution 1979.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

The UK is obligated to implement the international treaties that it has ratified, which frequently results in law or policy changes. The UK is also an active participant in many international fora, and this can trigger domestic law or policy changes. It is not certain whether the influence

of international treaties and international policy, more generally, in the UK will increase after Brexit.

In addition, international policy can have an impact on transactions. International 'soft law' instruments or initiatives, such as the World Bank Equator Principles and International Finance Corporation's Performance Standards on Environmental and Social Sustainability are increasingly adopted by lenders and imposed upon borrowers or projects through contractual arrangements.

UPDATE AND TRENDS

Key developments of the past year

33 Are there any emerging trends or hot topics in environment law in your jurisdiction?

The UK government initiated procedures for withdrawal from the European Union in 2017. The UK left the EU on 31 January 2020 and the government passed the European Union (Withdrawal) Act 2020 (the EU Withdrawal Act 2020). The EU Withdrawal Act 2020 details procedures for (among other things) the retention of EU law in the UK during the transition period, which will last until 31 December 2020. The general approach of the current EU Withdrawal Act 2020 is to retain the EU laws applicable in the UK until the end of this transition period, with powers granted to the UK Parliament to have scrutiny and oversight over this process. The EU Withdrawal Act 2020 also states that changes to EU law will be legally binding in the UK until the end of the transition period.

Until 31 December 2020, it is unlikely that there will be significant immediate change to the substance of environmental law applicable in the UK. There may, however, be law reform processes initiated throughout the transition period in a number of policy areas, particularly along the lines identified in the government's 25 Year Environment Plan (discussed further below). Separate bills relevant to EU exit will also be prepared relating to agriculture and fisheries. Those policy areas may therefore see a more substantial immediate change through the EU exit process.

The 2018 version of the European Union (Withdrawal) Act 2018 (the EU Withdrawal Act 2018) already contained provisions for the retention of various environmental principles contained in the Treaty on the Functioning of the European Union and elsewhere in the general body of EU law (eg, the polluter-pays principle, the precautionary principle, etc). The EU Withdrawal Act 2018 required the government to introduce a bill to enshrine environmental principles in UK law, required the creation of a policy statement elaborating the principles, and obliged the government to establish a duty to 'have regard to' the policy statement (section 16). It also required the establishment of a public authority with 'watchdog' functions to scrutinise the actions of government ministers and their compliance with environmental law. After the EU Withdrawal Act 2018 was adopted, the UK government released the Draft Environment (Principles and Governance) Bill (the Environment Bill) in December 2018. The full Environment Bill was first published before the 2019 General Election. The Bill is now at the Committee stage review in the House of Lords. The Bill was being considered by a Public Bill Committee but due to the Covid-19 circumstances, the Committee is now scheduled to report on the Bill by 29 September 2020.

In January 2018, the 25 Year Environment Plan was published, setting out the government's stated ambition in a number of environmental policy areas in England over the coming years. The core areas of focus identified in the 25 Year Environment Plan include:

- embedding an 'environmental net gain' principle for development in the planning regime;
- improving the land management system including new farming rules relating to water use;
- improving soil health;

- reducing flood and coastal erosion risks;
- publishing a strategy for nature, developing a Nature Recovery Network, and reviewing National Parks and Areas of Outstanding Natural Beauty;
- reforming the approach to water abstraction;
- encouraging community initiatives and programmes connecting people with the environment;
- maximising resource efficiency and reducing pollution, including litter and, in particular, aiming for zero avoidable plastic waste by 2042;
- publishing a Clean Air Strategy and Chemicals Strategy;
- introducing a new fisheries policy;
- achieving 'good environmental status' in UK seas while allowing marine industries to thrive;
- tackling climate change and providing leadership on the issue internationally; and
- assisting developing nations to improve the environment.

Coronavirus

34 What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

Government restrictions during the covid-19 pandemic have altered developments of environmental policies and initiatives.

In June 2020, the annual 25 Year Environment Plan Progress Report (the Plan Progress Report 2020) was published. The Plan Progress Report 2020 outlines the impacts of covid-19 on the UK in its Executive Summary. The report states that although the government remains committed to limiting the health and economic effects of the pandemic, the UK is preparing for a green recovery in the follow-up to the crisis. Indeed, it is confirmed that 'the government's environmental programme will play its full part in securing a sustainable and resilient recovery'.

The Plan Progress Report 2020 outlines that the 26th UN Climate Change Conference (COP26), due to take place in Glasgow in November 2020, will be postponed until 2021 as a result of covid-19. However, the UK remains determined in achieving its environmental commitments, in particular by:

- continuing to invest in nature through the Nature for Climate Fund;
- supporting the commitments set out in the Environment Bill;
- developing new public funding schemes to deliver beneficial environmental outcomes; and
- shaping new markets to incentivise more private sector investment in environmental projects, as outlined in the Green Finance Strategy developed in July 2019.

Covid-19 may impact the development of certain aspects of the 25 Year Environment Plan. In relation to the Plan commitment to publishing a Chemicals Strategy, this strategy will continue being developed only once pressures from dealing with covid-19 ease. Furthermore, in relation to clean air objectives, the report states that the first clean air zones (in Birmingham, Leeds and Bath) are only due to go live in early 2021, after the covid-19 outbreak response.

Regulations amendments

Covid-19 has impacted the developments of the 2019–2021 Environment Bill. The Bill was introduced in Parliament on 15 October 2019 and reintroduced, following a general election, on 30 January 2020. The Bill sets out the legislative framework to guide the government's commitment in improving the natural environment in the UK.

The Bill is currently under review at the Committee stage in the House of Commons. However, owing to the impact of covid-19, the Public Bill Committee has been suspended and is now scheduled to report on any amendments to the Bill by Tuesday, 29 September 2020.

Covid-19 has had less of an impact on the developments of the Agriculture Bill 2019–2021. This Bill seeks to provide a legislative framework to replace the current EU Common Agricultural Policy (CAP), which will stop applying in the UK at the end of the transition period. The Bill was given its First Reading in January 2020 and its Second Reading in February 2020. It is currently at the Committee stage in the House of Lords. A line-by-line examination of the Bill took place during the third day of the Committee stage on 14 July 2020 and the Committee stage continued on 16 July 2020 with further amendments to be discussed.

Despite the timely developments of the Agriculture Bill, concerns and criticisms are being raised as the Bill does provide for extensive measures in relation to food security. As covid-19 has exposed the fragility of the UK food system, the Agriculture Bill will be an essential piece of legislation to guide food security and environmental concerns in the post-Brexit and post-covid-19 phases.

Best practices for clients

Despite the challenges presented by covid-19, businesses and financial institutions should continue focusing on their long-term sustainability commitments. As confirmed by the Committee on Climate Change's June 2020 report, which was promoted to the UK government, the recovery from the covid-19 economic crisis will coincide with a pivotal time in the fight against climate change.

According to statistics released in June 2020 by the international non-profit The Climate Group, 97 per cent of business professionals have confirmed that their sustainability strategy has remained unchanged during the pandemic. However, 47 per cent of businesses confirmed that they will need more support from the government to continue meeting their original sustainability targets. This shows that, although businesses should play a crucial role in tackling climate change even during the covid-19 crisis, governments must have an interventionist approach in leading corporate action on climate.

In the UK, businesses are currently paying the climate change levy tax, introduced in 2000 to encourage businesses to use less energy, and obtain energy from renewable sources. The UK Chartered Institute of Taxation is currently exploring the possibility of setting up a climate change group to assess how the tax system could be used as a tool to discourage harmful environmental behaviours. Businesses should consider the possibility that the tax system could be further aligned to environmental objectives in the future, to reach net zero emissions by 2050. Making the tax system greener would incentivise businesses further in pursuing a green recovery from covid-19.

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LEGISLATION

Main environmental regulations

1 | What are the main statutes and regulations relating to the environment?

The National Environmental Policy Act (NEPA) is the umbrella procedural statute that requires federal agencies to consider the environmental impacts of their actions.

Several substantive statutes are media-specific:

- the Clean Air Act (CAA) regulates air quality and emissions;
- the Clean Water Act (CWA) regulates water quality and discharges;
- the Safe Drinking Water Act establishes drinking water standards for tap water and underground injection rules;
- the Resource Conservation and Recovery Act (RCRA) regulates hazardous and solid waste management;
- the Comprehensive Environmental Response, Compensation and Liability Act (also known as Superfund) addresses remediation of legacy disposal sites and release reporting; and
- the Oil Pollution Act provides for oil spill prevention and response.

Other statutes are resource-specific. The Endangered Species Act (ESA) protects listed endangered and threatened species and critical habitat. Other statutes protect certain species, including the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act and the Marine Mammal Protection Act.

Other statutes govern natural resource planning and development on federal lands onshore and on the Outer Continental Shelf, including:

- the Mineral Leasing Act;
- the Outer Continental Shelf Lands Act;
- the Federal Land Policy and Management Act;
- the Mining Law of 1872;
- the National Forest Management Act;
- the National Park Service Organic Act;
- the Wild and Scenic Rivers Act;
- the National Wildlife Refuge System Administration Act;
- the Rivers and Harbors Act; and
- the Coastal Zone Management Act.

Additional statutes cover certain products or wastes:

- the Toxic Substances Control Act regulates new and existing chemicals and products that contain these chemicals;
- pesticides are regulated under the Federal Insecticide, Fungicide and Rodenticide Act; and
- food, drugs and cosmetics are regulated under the Federal Food, Drug and Cosmetic Act.

Still more statutes focus on human health and safety:

- the Hazardous Materials Transportation Act (HMTA) regulates transportation of hazardous materials;

- the Occupational Safety and Health Act regulates hazards in the workplace; and
- the Emergency Planning and Community Right-to-Know Act provides emergency planning and notification for hazardous and toxic chemicals.

Nearly all of these statutes have implementing regulations issued and administered by federal agencies vested with jurisdiction. The federal and state governments share authority to administer some federal environmental programmes (eg, the CAA and the CWA). States also have their own, sometimes more stringent, environmental laws, such as groundwater protection schemes, additional recycling and extended producer responsibility requirements, and state equivalents of NEPA. Counties, cities and other local government entities may have their own requirements as well.

Integrated pollution prevention and control

2 | Is there a system of integrated control of pollution?

There is no general system providing integrated pollution prevention and control. The US Environmental Protection Agency (EPA) administers most of the national environmental statutes and regulations, but other federal agencies also have jurisdiction over federal lands, wildlife, or specific activity types. State and local authorities generally may impose additional requirements where not pre-empted by federal law. In some cases, the federal system is a delegated programme where states implement minimum federal standards, but can impose more stringent requirements.

Soil pollution

3 | What are the main characteristics of the rules applicable to soil pollution?

Superfund's remediation authorities extend to pollution of soil and other media. EPA lists sites on the National Priority List based on a hazard ranking system. Liability under the act and state laws is typically strict, joint and several, and retroactive, even to legacy contamination sites. Potentially responsible parties (PRPs) liable for remediation under Superfund include entities that arrange or arranged for the disposal of hazardous substances, transporters and current and former owners and operators of contaminated sites. These PRPs may be strictly and retroactively liable for investigation, evaluation and remedial action, which is generally selected by EPA in compliance with the National Contingency Plan. Superfund also provides that federal and state 'trustees' can recover from PRPs the costs associated with the injury to, destruction of or loss of natural resources. States also implement voluntary clean-up and brownfields programmes aimed at remediating and reusing legacy contaminated soil sites.

Regulation of waste

4 | What types of waste are regulated and how?

The RCRA defines 'solid waste' as 'any garbage, refuse, sludge . . . and other discarded material'. Under that law, 'solid' wastes include solid, liquid, semisolid or contained gaseous material. Solid wastes classified as 'hazardous wastes' under Subtitle C of RCRA include:

- certain specifically listed wastes;
- wastes that fail generic characteristics of toxicity, reactivity, corrosivity or flammability;
- certain mixtures of hazardous wastes and other solid wastes, and residues from treatment of hazardous waste; and
- media (eg, soil and debris) that contain hazardous waste.

Some states have adopted additional provisions that expand the generic characteristics of hazardous waste or the list of wastes identified as hazardous in that state.

RCRA creates a cradle-to-grave regulatory scheme, including detailed requirements for generators and transporters of hazardous wastes, as well as detailed design and operating standards for treatment, storage and disposal facilities, which generally require state or federal permits. RCRA requires that certain hazardous wastes meet treatment standards (incineration, stabilisation) before landfill disposal. Certain treatment standards are numerical and others require the use of certain treatment technologies. 'Universal' wastes, including batteries, certain suspended or cancelled pesticides, light bulbs and lamps and mercury-containing equipment (some states have expanded this list) are subject to streamlined hazardous waste storage, labelling and transportation requirements. Municipal solid wastes and medical and infectious wastes are generally subject to state transportation and disposal requirements. The Act also imposes recordkeeping requirements on disposers of hazardous waste. For hazardous waste storage, depending on the size and type of facility, RCRA regulations may impose accumulation time limits and technical standards (eg, for containers, tanks, drip pads or containment buildings), as well as training requirements, air emission limitations and the development of contingency plans and emergency procedures.

Under the HMTA, transporters of hazardous waste must obtain an EPA identification number and comply with EPA's hazardous waste manifest system. Exemptions exist for transporters of certain recycled or reclaimed hazardous wastes generated by small-quantity generators. Transporters must also take certain actions in response to discharges or spills of hazardous waste. Transporters must also comply with applicable Department of Transportation regulations that apply to the transport of hazardous materials by rail, aircraft, water vessel or truck. These include recordkeeping, training, manifest, labelling and packaging requirements. RCRA also restricts the export and import of hazardous waste.

RCRA and implementing EPA regulations and guidance exempt certain recyclable materials (including some by-products) and recycling activities from its hazardous waste regulations, generally if specified conditions are met. Recycling standards under RCRA range from full regulation to full exemption from regulation. Federal law does not mandate a circular economy or waste recycling in lieu of disposal. Under various state laws, extended producer responsibility requirements (including recycling targets) may apply for certain categories of products.

Regulation of air emissions

5 | What are the main features of the rules governing air emissions?

The CAA regulates air emissions from stationary and mobile sources and obliges the government to regulate air pollutants it determines may endanger public welfare. One of the main provisions of the CAA authorises EPA to establish National Ambient Air Quality Standards (NAAQS). To date, EPA has established NAAQS for six pollutants: particulate matter (coarse and fine), ozone, sulphur dioxide, nitrogen dioxide, carbon monoxide and lead. The CAA also requires EPA to regulate emissions of listed hazardous air pollutants (HAPs). States must adopt state implementation plans (SIPs) to achieve the NAAQS and to control emissions of criteria and hazardous pollutants within their boundaries.

Most facilities that produce air emissions are likely to be regulated by the CAA and must comply with federal and state requirements to meet or maintain the NAAQS. The act requires new or modified sources of air pollutants to obtain pre-construction approval. The preconstruction permit programme requires project proponents to demonstrate that emissions from the new or modified sources will not cause or contribute to an increase in air pollutants that would degrade air quality, and requires installation of certain levels of pollution control equipment depending on the area's air quality. Following construction, new or modified sources must obtain operating permits, which require compliance with equipment standards (eg, best available pollution control equipment) and emissions limits. These standards and limits vary based on facility type and the nature of emissions. Permitting thresholds, emissions limits and equipment standards are generally more stringent for sources emitting HAPs or located in NAAQS non-attainment areas.

Although EPA issues permits in some circumstances, most permits are issued by state or local air pollution control agencies under their SIP authority (with EPA oversight). Operating permits are generally required for larger sources and sources that are subject to new source performance standards, HAP standards and acid rain control requirements. Operating permits typically last for five years and include enforceable emissions standards and limitations (which vary by industry or source category), compliance schedules, and monitoring and reporting requirements.

Beyond stationary sources, EPA has broad authority over mobile sources including aircraft, on-road vehicles and non-road engines and equipment. It sets emission standards for vehicles, imposes testing and certification for engines and controls fuel formulations and additives. Passenger cars and light-duty trucks must meet tailpipe emission standards for various air pollutants and greenhouse gases (GHGs). In September 2019, EPA formally revoked California's unique ability to set stricter vehicle emissions standards, which are followed by about a dozen other states. In April 2020, following a re-evaluation of stricter standards previously set, EPA and the Department of Transportation issued new standards for tailpipe carbon dioxide emissions and corporate average fuel economy for passenger cars and light-duty trucks for model years 2021 to 2026. For aircraft, in August 2016, EPA finalised a finding that GHG emissions from certain classes of aircraft endanger human health and welfare. On 22 July 2020, EPA unveiled its proposal for the first-ever Clean Air Act GHG emission standards for aircraft. If finalised, the standards would apply to manufacturers of new aircraft and new aircraft engines, with compliance determined as part of the Federal Aviation Administration's airworthiness certification process.

The Clean Air Act also requires EPA to address ozone-depleting substances, acid rain and regional haze. In June 2019, EPA formally withdrew the Clean Power Plan (CPP) aimed at GHG emissions reductions from existing power plants nationwide, and replaced it with the Affordable Clean Energy (ACE) rule. Like the CPP, which had been tied up in litigation and stayed by the Supreme Court, the ACE rule is now in litigation. In the face of significant litigation and reordering of administrative priorities,

the fate of the above regulatory programmes and climate change regulation in the US remains uncertain. For further discussion of the climate change issues, see the United States Climate Regulation chapter.

The US currently has no federal law setting energy efficiency standards or requiring energy audits for buildings. States and localities have promulgated green building standards which generally are voluntary, and are exploring other means to make buildings more energy efficient.

Protection of fresh water and seawater

6 | How are fresh water and seawater, and their associated land, protected?

The CWA requires a permit for any person or entity to discharge either pollutants or dredged or fill material to waters of the United States (which include jurisdictional wetlands). EPA oversees the former; the US Army Corps of Engineers oversees the latter (subject to EPA veto). Individual states also maintain their own programmes regulating these discharges to surface waters, and may be delegated authority to implement the act within their borders. Industrial and municipal 'discharges' of wastewater and designated discharges of storm water to these waters that pass through a 'point source' and 'discharges' of fill material are subject to permitting. Permits must contain the more stringent of technology-based effluent limitations reflecting uniform national standards or effluent limitations designed to protect the water quality of the specific water body to which the discharge is made. State law governs extraction of water for consumptive use.

Protection of natural spaces and landscapes

7 | What are the main features of the rules protecting natural spaces and landscapes?

Several categories of federally owned and managed lands are set aside for conservation and recreational purposes and under various agencies' jurisdiction. Such designations are usually made by Congress pursuant to an organic statute and a site-specific statute, with the exception of the presidential designations of national monuments under the Antiquities Act. Other categories of protected areas include national parks, national wildlife refuges, national forests, wild and scenic rivers and wilderness areas. Each type of designation entails balancing predominant or multiple uses. The Department of the Interior manages most public lands, including both onshore and the 1.7 billion acres of the Outer Continental Shelf. The Department of Agriculture manages national forests. Designated wilderness areas receive the most protection. Individual states and localities also have systems of protected areas.

Protection of flora and fauna species

8 | What are the main features of the rules protecting flora and fauna species?

The ESA provides for the protection and recovery of listed endangered and threatened plants and animals and the habitats upon which they depend. Absent a 'no effect' determination, each federal agency must engage in consultation to ensure that its actions are not likely to jeopardise the continued existence of the species, or result in destruction or adverse modification of the species' designated critical habitat. The ESA further prohibits anyone from 'taking' a listed species and from engaging in commerce in listed animals or plants or parts thereof. 'Taking' is broadly defined to include killing, capturing or destroying habitat. Some states have enacted legislation to protect endangered and threatened plants and animals (in addition to the federal ESA list) within those states. The Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, and their respective regulations, also protect against certain actions 'taking' migratory birds and eagles.

Noise, odours and vibrations

9 | What are the main features of the rules governing noise, odours and vibrations?

Noise, odours and vibrations are primarily regulated, if at all, at the local or state level. Many states have noise pollution programmes, which vary widely. Local zoning laws and allowed activities also vary widely. Federal noise regulations cover standards for transportation equipment, air and motor carriers, low noise emission products and construction equipment, and are enforced by EPA or other designated federal agencies. Workplace exposure to noise, odours and vibrations is regulated by the US Occupational Safety and Health Administration. Under common law tort principles, private parties may bring nuisance actions for excessive noise, odours and vibrations.

Liability for damage to the environment

10 | Is there a general regime on liability for environmental damage?

There is no US generalised regime for environmental damages. Statutes, regulations and common law can impose various types of liability, including administrative, civil and criminal. Courts in turn establish precedent for liability in cases arising under various environmental laws. Alleged violators may face government administrative actions, civil suits or citizen suits. Only the government can prosecute criminal liability in court.

The government generally follows proportional enforcement. Minor offences may trigger administrative or civil sanctions; more serious and intentional violations trigger more severe sanctions or even criminal charges. The government's burden of proof is highest in criminal cases. Some programmes like Superfund impose strict liability based on party status. RCRA authorises the government or private parties to seek relief for 'imminent and substantial endangerment' to the environment.

Environmental taxes

11 | Is there any type of environmental tax?

Most US environmental programmes are regulation based, not tax based. Some environmental tax programmes do exist. For example, the Oil Pollution Act established a federal trust fund to clean up oil spills, financed by a per-barrel tax collected from the oil industry. An underground storage tank trust fund is funded by taxes on certain motor fuels. A federal tax also applies to use or import ozone-depleting chemicals. The Surface Mine Control and Reclamation Act authorises a reclamation programme for abandoned mine land, which is funded by a coal tax. Environmental taxes are more prevalent on the state and local levels, including taxes relating to waste and battery disposal, chemicals, petroleum, tires, air emissions, oil spill response, litter control and water quality.

HAZARDOUS ACTIVITIES AND SUBSTANCES

Regulation of hazardous activities

12 | Are there specific rules governing hazardous activities?

See the Resource Conservation and Recovery Act regarding the generation, treatment, storage, disposal and management of hazardous wastes; the Hazardous Materials Transportation Act for transport and handling of hazardous materials; and the Occupational Safety and Health Act of 1970 (OSHA 1970) for worker safety at facilities. OSHA 1970 also establishes specific standards for the construction, maritime and agriculture industries, designed to reduce on-the-job injuries and to limit workers' risks of developing occupational diseases from exposure to various air contaminants, asbestos and other substances.

Regulation of hazardous products and substances

13 | What are the main features of the rules governing hazardous products and substances?

Under the Toxic Substances Control Act, reporting, recordkeeping and other requirements may apply to manufacturers (including importers), processors, distributors and users of chemical substances. Manufacturing a non-exempt new chemical substance (not on the inventory under the Act) is prohibited unless and until the US Environmental Protection Agency (EPA) makes an affirmative finding either that a chemical is not likely to present an unreasonable risk or that manufacture may begin subject to a compliance order imposing restrictions on the new chemical. Designated 'significant new uses' of approximately 2,800 chemicals are subject to similar notification and review requirements.

Following amendments to the act passed in 2016, EPA also has authority to:

- prioritise chemicals for in-depth review;
- conduct risk evaluations of high-priority chemicals; and
- regulate those chemicals found to present an unreasonable risk under the conditions of use.

EPA further may issue either orders or rules requiring testing by manufacturers and processors. For new chemicals (ie, not on the inventory), EPA must now make affirmative findings (eg, whether a chemical is likely to present an unreasonable risk under the conditions of use) with an order to follow if the 'likely to present' finding is made. EPA actions may pre-empt certain state restrictions on chemicals. Based on chemical manufacturer, importer, and processor submissions, EPA updates its inventory which identifies those chemical substances that are considered to be active chemical substances. EPA is also prioritising chemicals for possible regulation pursuant to the 2016 statutory amendments to the act.

The Consumer Product Safety Improvement Act 2008, implemented by the Consumer Product Safety Commission (CPSC), limits the levels of lead, phthalates and certain chemicals allowed in children's products. The CPSC also administers the Federal Hazardous Substances Act, which requires precautionary labelling to alert consumers to certain products' potential hazards. Moreover, the Federal Trade Commission has established 'green guides' for environmental marketing claims. States additionally have imposed requirements to regulate and restrict the sale of certain products containing specified hazardous substances.

Industrial accidents

14 | What are the regulatory requirements regarding the prevention of industrial accidents?

Under the 'general duty' clause of OSHA 1970, each employer is required to provide to employees a place of employment free from recognised hazards. The US Occupational Safety and Health Administration (OSHA) has promulgated numerous specific standards for industrial processes, establishing specific workplace practices as well as imposing training requirements. For instance, the OSHA's process safety management standard addresses hazards from the use of highly hazardous chemicals, and its hazardous waste operations and emergency response standard requires training and control measures for clean-up operations.

The Emergency Planning and Community Right-to-Know Act requires facilities to report chemical storage and release information, and also requires state and local governments to undertake emergency planning activities. In addition, under the Clean Air Act, facilities that produce, handle, process, distribute or store certain chemicals must prepare and submit a risk management plan to EPA. Certain facilities are also required to prepare, develop and implement oil spill prevention, control and countermeasure plans.

ENVIRONMENTAL ASPECTS IN TRANSACTIONS AND PUBLIC PROCUREMENT

Environmental aspects in M&A transactions

15 | What are the main environmental aspects to consider in M&A transactions?

Purchasers should:

- check the target facilities' regulatory compliance;
- conduct 'all appropriate inquiries' including evaluating the facilities' environmental conditions and potential liability and costs for onsite remediation; and
- evaluate potential liabilities associated with the current and historic generation and offsite disposal of wastes from the target's operations.

A share purchaser generally acquires all the corporate target's assets and liabilities, including the predecessor's environmental liabilities. An asset purchaser may be able to acquire the assets free of environmental liabilities arising from pre-closing regulatory non-compliance by the target and from historic offsite disposal.

Environmental aspects in other transactions

16 | What are the main environmental aspects to consider in other transactions?

The scope of many environmental laws has been interpreted quite broadly to impose liability on entities beyond the actual owner of a facility or business. For instance, lenders have been held liable in some circumstances for their borrower's environmental liabilities (although there are some defences and 'safe harbours' available for lenders). An entity acquiring contaminated real property (whether through a purchase, foreclosure or corporate restructuring) will be liable for the remediation of such contamination, even if the acquirer had nothing to do with the cause. The acquirer may have contractual indemnity or statutory rights of contribution from one or more prior owners, but government enforcement authorities can choose to seek recourse against the current owner. Transactions involving entities in bankruptcy present unique environmental issues. Environmental claims that 'continue' after a transaction or even after an entity emerges from bankruptcy, such as obligations to correct ongoing non-compliance and to remediate contaminated property, often are not discharged in the bankruptcy.

Environmental aspects in public procurement

17 | Is environmental protection taken into consideration by public procurement regulations?

National regulations require the US government to take into account certain environmentally preferable products in the procurement process. Some state and local governments also have procurement policies that favour environmentally preferable products. Moreover, certain environmental violations may result in a company being suspended or debarred from doing business with the US, state, or local government.

ENVIRONMENTAL ASSESSMENT

Activities subject to environmental assessment

18 | Which types of activities are subject to environmental assessment?

The National Environmental Policy Act (NEPA) requires environmental review of most discretionary federal agency actions, including approving, financing, assisting or conducting plans, projects or

programmes, whether regional or site-specific. No industrial activity restriction exists; in fact, many major NEPA documents address the federal government's natural resource management decisions. Certain actions are exempt from NEPA, such as ministerial agency actions or where potentially duplicative environmental reviews are required. In some 'small handles' situations where only a small component or minor approval involves a federal nexus, NEPA might not apply to the larger project. In July 2020, the Council on Environmental Quality within the White House amended the nearly 40-year-old NEPA implementing regulations applicable across the federal government, including a renewed focus on which federal agency actions may be exempt from NEPA. Those regulations are now being challenged in litigation. Certain states have laws analogous to NEPA, which vary significantly.

Environmental assessment process

19 | What are the main steps of the environmental assessment process?

NEPA requires an environmental impact statement (EIS) for 'proposals for . . . major federal actions significantly affecting the quality of the human environment'. A less detailed environmental assessment (EA) may suffice for a federal agency action with insignificant or unclear impacts. Finally, categorical exclusions apply to categories of agency actions that do not significantly affect the environment individually or cumulatively. An agency can perform more detailed review under NEPA than legally required, and is guided by agency-specific regulations implementing NEPA.

The lead federal agency is responsible for the NEPA review, and may invite assistance by cooperating or participating federal, state, tribal and local agencies with jurisdiction or special expertise. The lead agency also may hire and supervise third-party consultants, typically funded by the project proponent, to prepare the NEPA analysis. For an EIS, and often an EA, the lead agency will publish a notice of intent for the proposed action, conduct scoping of affected resources or values, prepare a draft analysis, and then finalise its analysis and decision. The project proponent and public may submit information and comments during this process, including typically a minimum 45-day comment period on the draft analysis. The adequacy of the final impact statement may be challenged in court. There is increasing focus, to facilitate and expedite NEPA reviews, on integration of NEPA with early planning efforts and with other environmental requirements for a given project.

REGULATORY AUTHORITIES

Regulatory authorities

20 | Which authorities are responsible for the environment and what is the scope of each regulator's authority?

The US Environmental Protection Agency (EPA) implements most national environmental statutes. The Department of the Interior and the US Forest Service implement a variety of laws addressing environmental review, wildlife and cultural and historic resources. The Clean Water Act (CWA) wetlands fill permits are issued by the US Army Corps of Engineers with EPA oversight. The US Department of Justice litigates cases arising under federal environmental and natural resources laws. State agencies issue most operations permits pursuant to authority delegated by EPA, and also share enforcement authority. States generally take the lead under the Clean Air Act, CWA, and the Resource Conservation and Recovery Act on inspections and enforcement, with EPA retaining significant 'overfiling' enforcement authority with regard to violations of these statutes at individual facilities. In other areas (eg, the Toxic Substances Control Act; the Federal Insecticide, Fungicide, and Rodenticide Act; and the Emergency Planning and Community Right-to-Know Act) EPA generally takes the lead on enforcement.

Investigation

21 | What are the typical steps in an investigation?

Although state and federal environmental agencies routinely conduct inspections of regulated facilities, comprehensive governmental investigations are not usually initiated as a result of most regulatory compliance issues. Many compliance issues, whether self-disclosed or identified as a result of an agency inspection, are resolved informally. If agency inspectors identify non-compliance through review of a regulated facility's records or an onsite inspection, under most circumstances agency personnel will initially discuss the alleged violations with facility personnel. If a regulatory agency initiates a comprehensive or even a limited investigation, it will typically make a site inspection, undertake testing, sampling or similar activities, conduct interviews of facility personnel and prepare a written report and notice of violation identifying the practices or events constituting alleged non-compliance. The facility is entitled to obtain split samples of materials removed by the agency for testing, to retain copies of records requested by the agency and to be represented by counsel throughout the investigation.

Environmental agencies also have the power to initiate criminal investigations, which are generally brought when 'serious' environmental violations (which pose actual environmental harm or substantial risks of harm) and are committed 'knowingly' or 'intentionally'. These criminal charges can be brought against the company, culpable or responsible individuals, or both. If criminal charges are brought against individuals in the federal system, the risks of an active prison sentence are real. With regard to companies, apart from substantial fines, the biggest adverse impact can arise from suspension or debarment from public contracting, which can also spill over into contractual bars imposed by the compliance requirements of larger corporations, which prohibit them from using vendors with corporate criminal records.

Administrative decisions

22 | What is the procedure for making administrative decisions?

Most administrative decision-making processes are open and allow for participation by interested parties and the general public. The procedural aspects of administrative decision-making vary based on a number of factors, including the agency involved (eg, federal or state), the type of decision (eg, individual permit or variance, enforcement) and the environmental statute under which the decision is made. Some administrative processes resemble a formal trial. More informal proceedings are decided on written submissions. Although procedures vary, the parties typically may use any type of evidence they deem relevant in administrative proceedings. There also are means to seal confidential information if applicable. Any subsequent court challenge to a final agency action is typically based on and limited to the same administrative record as before the agency.

Sanctions and remedies

23 | What are the sanctions and remedies that may be imposed by the regulator for violations?

Federal and state agencies may pursue injunctive relief and require the abatement or cessation of permit violations or environmental harm. Remedial steps may include installing equipment to control emissions, ceasing certain activities or revoking a permit or shutting down a facility. Many environmental statutes also authorise civil and criminal penalties, often calculated on a per-day, per-violation basis. Agencies may – and sometimes must – issue warnings or notices of violations before taking more severe enforcement actions. An agency typically may pursue an administrative enforcement action or sue the violator in federal court.

Appeal of regulators' decisions

24 | To what extent may decisions of the regulators be appealed, and to whom?

Nearly all formal administrative decisions from environmental agencies can be appealed by the recipient. Appeals can be based on factual findings and legal conclusions and can also challenge the extent of the remedy imposed by the decision-maker. Administrative appeal procedures differ among agencies, including potential proceedings before an Administrative Law Judge or an agency appeals board. After exhaustion of administrative remedies, a final agency action may be appealed to federal district court, or in some instances directly to a US court of appeals. Judicial review follows the Federal Rules of Civil Procedure, the Federal Rules of Appellate Procedure, and individual courts' local rules, and is deferential to agencies.

JUDICIAL PROCEEDINGS

Judicial proceedings

25 | Are environmental law proceedings in court civil, criminal or both?

Most violations trigger administrative or civil enforcement. In addition, a party may be prosecuted in a criminal case if that party has committed a knowing violation of the law or a permit (or in some cases, even a negligent violation). Civil regulators and criminal prosecutors have substantial discretion about whether and which charges to bring in response to environmental violations, but typically seek remedies commensurate with the underlying offense. Since the consequences associated with criminal charges are more severe, US law imposes a higher burden of proof for crimes (eg, 'beyond a reasonable doubt') as opposed to civil violations (eg, 'preponderance of the evidence' or 'more probable than not'). A party challenging a federal agency action on environmental grounds may bring a civil case in a proper federal district court or a specific (eg, appellate) court if the relevant statute so directs.

Powers of courts

26 | What are the powers of courts in relation to infringements of environmental law?

In civil cases brought by governmental entities or citizen plaintiffs to enforce environmental laws, courts are generally authorised to require violators of environmental legal requirements to pay penalties and to undertake injunctive relief to abate the violation or address the environmental impacts of the violation. In a criminal case, individual defendants who plead guilty or are convicted at trial can generally be ordered to pay a higher fine and serve time in prison. The primary factors that the US courts consider in imposing such a sentence include:

- the level of harm or danger imposed;
- the degree of the violations;
- the duration of the violations; and
- whether the violations required a substantial clean-up.

Under Federal Rule of Civil Procedural 65 and similar court rules and case law, courts may also grant a preliminary injunction or other interim relief to, for example, stay a challenged agency action or prevent a project from going forward during the litigation.

Civil claims

27 | Are civil claims allowed regarding infringements of environmental law?

Certain environmental statutes (eg, the Clean Air Act (CAA), the Clean Water Act and the Resource Conservation and Recovery Act) contain 'citizen suit' provisions authorising non-governmental entities to sue third parties for injunctive relief for violations. A private party claiming injury from hazardous activities also may seek damages or injunctive relief in a tort action. No contractual relationship among the private parties is necessary, but contracts can create obligations for compliance with environmental laws. The Administrative Procedure Act also generally enables citizen plaintiffs to file civil lawsuits challenging final agency actions, or omissions in some circumstances, as arbitrary and capricious or otherwise for failure to comply with procedural or substantive requirements of other laws.

Defences and indemnities

28 | What defences or indemnities are available?

In civil cases, potential defences frequently include:

- statutes of limitations (up to five years is common);
- ambiguity of statutory or regulatory language;
- compliance with a valid permit;
- factual defences; and
- limited statutory defences.

In criminal cases, additional defences often may include:

- lack of knowledge;
- the government's failure to meet its heightened burden of proof; and
- other constitutional arguments unique to criminal cases (eg, lack of fair notice or void for vagueness).

A liable party could have indemnity rights against other parties or be a party to contracts with other parties under which the violator in turn may seek recovery, but such indemnities do not shield the violator from liability to the government. In Superfund litigation, in which multiple parties can be liable, courts have generally held that liability is strict and joint and several (subject to potential 'divisibility' defences).

Directors' or officers' defences

29 | Are there specific defences in the case of directors' or officers' liability?

Routine environmental violations generally do not create officer and director liability. However, some federal environmental statutes, including the CAA, specifically state that an 'operator' or 'responsible corporate officer' can include 'any person who is senior management personnel or a corporate officer.' In addition, a number of reports submitted to the US Environmental Protection Agency and state agencies are required to include formal certifications (under oath) with regard to the accuracy of the information contained therein, which can provide the basis for claims against corporate officers.

More often, various theories under laws governing the internal governance of corporations and other business enterprises can support personal liability of corporate directors and officers under environmental and other public health laws – for example:

- the corporate veil is pierced;
- the director or officer personally participated in the improper activity; or
- the director or officer personally exercised substantial control and supervision over the activity in question.

US law generally does not permit liability based only on the corporate position or job title of director or officer. However, federal prosecutors can rely on a range of surrogates to prove the executive's knowledge. Therefore, criminal charges can be pursued when the directors or officers:

- are personally aware of, or involved in, the commission of a crime;
- aid and abet a crime;
- fail to prevent the commission of a crime by others within the corporation by either turning 'wilfully blind' or negligently supervising the conduct of those subject to their control; or
- fail to implement preventive measures to ensure that violations do not occur.

Directors' and officers' liability insurance and corporate indemnification can mitigate such liability.

Appeal process

30 | What is the appeal process from trials?

In the federal courts, a judgment from a trial-level federal district court is directly appealable to one of 12 federal circuit courts of appeals. From a circuit court of appeals, a party may petition the US Supreme Court to hear an appeal, but the Supreme Court's jurisdiction is discretionary and rarely exercised.

Each of the 50 states has its own court system, but generally there is a right of review from the trial level to an intermediate appellate court and then to the state's highest court. In many states, the highest court's jurisdiction is discretionary. State court systems vary as to the possible levels of appeal, but there are typically two or three levels of courts (although the jurisdiction of some courts of appeal may be discretionary).

INTERNATIONAL TREATIES AND INSTITUTIONS

International treaties

31 | Is your country a contracting state to any international environmental treaties, or similar agreements?

Yes. For example, regionally, the United States and Canada have a bilateral Air Quality Agreement. The United States is also party to the North American Agreement on Environmental Cooperation and the North American Free Trade Agreement and its side agreements, which have environmental aspects.

Multilaterally, the United States is party to, among other agreements: the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter; the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora; and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer. The State Department maintains a complete list of international agreements to which the United States is party. The United States is not a party to a number of other multilateral environmental agreements, generally for lack of certain domestic authority for which new legislation would be required before the US could join, including: the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal 1989; the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade 1998; and the Stockholm Convention on Persistent Organic Pollutants 2001.

International treaties and regulatory policy

32 | To what extent is regulatory policy affected by these treaties?

With few exceptions, treaties are generally not given direct effect in US law. The US has generally implemented its treaty obligations under multinational environmental agreements through national statutes and regulations. In some cases, this domestic authority has pre-dated the US international obligations and US law and policy make no direct reference to treaties. In other cases, however, the US has enacted new legislation expressly to satisfy international obligations, and US policy under such laws is closely keyed to the developments under international agreements (eg, regulatory policy on ozone depleting substances and the Montreal Protocol). As a general matter, federal agencies that are responsible for developing, implementing and enforcing US environmental regulatory policy are conscious of US obligations under international agreements, as well as of developments under agreements to which the US is not yet a party.

UPDATE AND TRENDS

Key developments of the past year

33 | Are there any emerging trends or hot topics in environment law in your jurisdiction?

The election of President Trump in November 2016 signalled a sea change in environmental law in the US. Since the President's inauguration, the Trump administration, guided by a focus on states' rights and cooperative federalism, has moved to roll back the federal environmental policies of the Obama and earlier administrations and reduce funding for federal environmental agencies and programmes. A divided Congress, however, has ensured the preservation of core environmental laws in their current forms.

Much of the Trump administration's early effort in the environmental law sphere involved domestic energy development and climate change. On the international front, the US Department of State formally announced in August 2017 its intention to withdraw the United States from the Paris Agreement as soon as it is eligible to do so. The Trump administration has taken numerous steps through regulations and executive orders to suspend, repeal or revise Obama administration rules regarding, among other things, GHG emissions from power plants, domestic energy production and additional energy efficiency regulations.

The Trump administration has also taken a series of actions to foster increased and faster development of energy and other infrastructure, including on public lands. For example, the administration is pursuing a new five-year Outer Continental Shelf leasing programme, has reduced the size of national monuments, has issued new rules governing the Endangered Species Act species listing and consultation process, and is developing new mitigation policies. Moreover, through a series of White House initiatives such as One Federal Decision and individual agency guidance, now largely codified in the July 2020 Council on Environmental Quality final rule on the implementation of the National Environmental Policy Act, the administration has aimed to accelerate prior administrations' efforts to streamline environmental review and permitting, particularly for large complex projects.

The Trump administration has also targeted the Clean Water Act Waters of the United States (WOTUS) rule. In September 2019, the US Environmental Protection Agency (EPA) and the US Army Corps of Engineers published a rule to rescind the 2015 WOTUS rule and restore the pre-existing definition of 'waters of the US' uniformly across the US. In April 2020, EPA and Army Corps of Engineers then published a second rule establishing a new, narrower WOTUS definition. Multiple lawsuits have been filed to challenge the rescission of the WOTUS rule and the agencies' April 2020 definition of WOTUS.

All these efforts have triggered significant amounts of litigation across the country, particularly under the Administrative Procedure Act. In several instances, ongoing challenges to Obama administration rules have been mooted or stayed to accommodate new litigation on superseding Trump administration regulatory actions. In some cases where new actions were struck down in court, the original challenges subsequently resumed. Other cases seek broad relief from industry for climate change impacts under common law theories. These cases will continue for the foreseeable future.

The Trump administration's budget proposals would also severely reduce the budgets of the major federal environmental agencies, though to date Congress has declined most of those cuts. In reaction to the above federal environmental law developments, and those that can be expected in the future, additional environmental statutory and regulatory protection, as well as environmental enforcement, can be expected at the state and local levels, subject to their budgeting constraints. In addition, increased numbers of citizen suits by non-environmental and public health organisations will continue to be filed.

Other hot topics in US environment law include but are not limited to regulation of plastics, PFAS and other chemicals, mobile source emissions, protected species and environmental reviews. Certain types of projects, including pipelines and other large-scale infrastructure, also are frequent targets for litigation. Environmental law is also closely tied to trends in larger administrative law, including generally reduced judicial deference to federal agency decisions.

The November 2020 election, regardless of the result, will undoubtedly result in further environmental regulatory changes and related litigation.

Coronavirus

34 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

Congress has not enacted environmental law-specific legislation as part of the ongoing response to the global covid-19 pandemic. However, the Trump administration and relevant individual agencies have pursued a number of initiatives to reduce interim compliance burdens, invoke 'emergency' authorities and promote rapid economic recovery. In addition, on 1 June 2020, the US Environmental Protection Agency (EPA) released a Compliance Advisory to address ongoing concerns related to products that make unapproved or potentially false or misleading claims to kill SARS-CoV-2, the novel coronavirus that causes covid-19. EPA has received numerous reports of such products and warns that they may present risks to consumers because the Agency has not reviewed or accepted those anti-coronavirus claims. EPA states that it is investigating these reports, and coordinating with retailers to remove these pesticide products from the market and with the US Department of Justice to bring enforcement cases against their distributors.



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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

Australia is a party to the United Nations Framework Convention on Climate Change (UNFCCC), which it ratified in 1992.

Australia ratified the Paris Agreement in 2016. Under the Paris Agreement, Australia has committed to reducing its greenhouse gas (GHG) emissions by 26–28 per cent below 2005 levels by 2030.

Australia ratified the Kyoto Protocol to the UNFCCC in 2007. Australia adopted a target of limiting its GHG emissions growth over the first commitment period (2008–2012) to 108 per cent of 1990 levels, which it exceeded. Australia's target under the second commitment period (2013–2020) is 99.5 per cent of 1990 levels. So far, it is on track to meet its second target. In 2016, Australia ratified the Doha Amendment to the Kyoto Protocol. The Doha Amendment is yet to come into force.

Australia is a party to the Cancun Agreements. Under the Cancun Agreements, Australia made a pledge to reduce GHG emissions by 5 per cent below 2000 levels by 2020.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

The provisions of an international treaty to which Australia is a party do not automatically form part of Australian law. Before that can happen, Parliament must pass legislation that incorporates the treaty's provisions into domestic law. Until the provisions are incorporated, the treaty does not operate as a direct source of individual rights and obligations.

Nonetheless, courts have viewed the ratification of treaties as positive statements by the Executive Government. In *Minister of State for Immigration and Ethnic Affairs v Teoh* [1995] HCA 20 (7 April 1995), the High Court held that the ratification of a treaty, even without domestic implementation, is enough to give individuals a 'legitimate expectation' that government decision makers will act in conformity with the treaty.

Moreover, courts often use treaties to help in resolving ambiguities in legislation, and to guide the development of common law.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

In Australia, climate policy is a polarising and political issue. Several proposals to establish an emissions trading scheme have been unsuccessful. The Emissions Reduction Fund (ERF) is now the Commonwealth government's central policy for limiting GHG emissions. The ERF is designed to provide an incentive for people to adopt new practices and technologies that will reduce their GHG emissions.

The government's other key climate policies are:

- the National Greenhouse and Energy Reporting (NGER) framework, which requires companies to report information about their GHG emissions;
- the Safeguard Mechanism, which encourages large facilities not to increase their emissions above 'baseline' levels; and
- the Renewable Energy Target (RET), which creates a financial incentive for people to invest in new large-scale renewable power stations and to install new small-scale systems.

The state and territory governments also have their own climate policies. For example, the Queensland government has two key strategies to respond to climate change: the Queensland Climate Transition Strategy, which outlines how Queensland aims to transition to a zero-net emissions future; and the Queensland Climate Adaptation Strategy, which outlines how Queensland is preparing for the current and future impacts of a changing climate.

Main national legislation

- 4 | Identify the main national laws and regulations on climate matters.

Australia's main national law on climate matters is the National Greenhouse and Energy Reporting Act 2007 (Cth) (the NGER Act). The NGER Act introduced a national framework (the NGER Scheme) for reporting and disseminating company information about GHG emissions, energy production and energy consumption.

The first object of the NGER scheme (section 3(1)) is to introduce a framework that:

- informs government policy formulation and the Australia public;
- helps Australia to meet its international reporting obligations;
- assists Commonwealth, state and territory government programmes and activities; and
- avoids duplication of similar reporting requirements at the state and territory level.

The second object of the NGER Scheme is establish a safeguard mechanism by ensuring that 'net covered emissions of greenhouse gases from the operation of a designated large facility do not exceed the baseline applicable to the facility' (section 3(2)). Included as GHGs under the NGER Scheme are carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, and various hydrofluorocarbons and perfluorocarbons (section 7A). A covered emission is any release of a GHG, as defined, into the atmosphere as a direct result of an activity (National Greenhouse and Energy Reporting Regulations 2008 (Cth), regulation 2.23). A designated large facility is a facility that emits more than 100,000 tonnes carbon dioxide equivalent ('CO₂-e') GHGs in a financial year (NGER Act section 22XJ, National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (Cth) section 8).

The NGER Act provides for penalties for non-compliance. Most penalty provisions in the NGER Act impose civil penalties (eg, for providing false or misleading information to the Clean Energy Regulator under section 71(4)), but there are several provisions that impose criminal penalties (eg, for refusing to comply with a request from an authorised officer during a warrant execution under section 61(3)). The NGER Act also provides for the issuing of infringement notices (section 39).

Other laws relating to climate matters are contained in:

- the Carbon Credits (Carbon Farming Initiative) Act 2011 (Cth) (the CFI Act);
- the Australian National Registry of Emissions Units Act 2011 (Cth) (the ANREU Act);
- the Building Energy Efficiency Disclosure Act 2010 (Cth);
- the Greenhouse and Energy Minimum Standards Act 2012 (Cth);
- the Corporations Act 2001 (Cth); and
- the Renewable Energy (Electricity) Act 2000 (Cth) (the RET Act).

National regulatory authorities

- 5 Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

The main national regulatory authority is the Clean Energy Regulator (the Regulator). The Regulator is an independent statutory authority. It is responsible for administering the NGER Act.

The Regulator also has administrative responsibilities for the Emissions Reduction Fund, under the CFI Act; the Renewable Energy Target under the RET Act; and the Australian National Registry of Emissions Units, under the ANREU Act.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

In Australia, eight sectors are the biggest contributors to GHG emissions: electricity, transport, stationary energy (excluding electricity), agriculture, fugitive emissions, industrial processes, waste, and land use change and forestry (LULUCF). The following table sets out the MtCO₂-e GHG emissions each sector contributed in the year to December 2019.

Sector	MtCO ₂ -e GHG emissions
Electricity	175.4
Transport	100.2
Stationary energy	102.1
Agriculture	68.8
Fugitive emissions	56.7
Industrial processes	34.7
Waste	13.0
LULUCF	-18.5
All sectors	532.5

This information is taken from the Australian government's Quarterly Update of Australia's National Greenhouse Gas Inventory: December 2019 (2019).

Australia does not generally have mandatory limitation or reduction obligations. Instead, there is a range of incentive schemes in place to encourage emission reductions.

National GHG emission projects

- 7 Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

Australia has four main GHG emission reduction projects:

- the NGER Scheme
- the Emissions Reduction Fund (ERF);
- the Safeguard Mechanism; and
- the Renewable Energy Target (RET).

The NGER Scheme provides a national framework for reporting and disseminating company information about GHG emissions, energy production and energy consumption. Corporations that meet a specified threshold must register under the framework and provide a report every year.

The ERF is designed to provide an incentive for businesses, land-owners, state and local governments, community organisations and individuals to adopt new practices and technologies that will reduce emissions. The ERF operates by offering people the chance to earn Australian carbon credit units (ACCUs). One ACCU is earned for each tonne of CO₂-e that a project stores or avoids. People can sell ACCUs to generate income. ACCUs may be purchased by the government through a carbon abatement contract, or on the secondary market.

The safeguard mechanism encourages large facilities not to increase their emissions above 'baseline' levels (NGER Act, Part 3H). The safeguard mechanism requires the person or entity with operational control of the facility to keep their net direct emissions within 'baseline' levels. The safeguard mechanism only applies to businesses that are 'designated large facilities', which are facilities that directly emit more than 100,000 tonnes of CO₂-e per financial year.

The RET creates a financial incentive for people to invest in new large-scale renewable power stations and to install new small-scale systems (eg, household solar panels). The RET is designed to reduce GHG emissions in the electricity sector, and to encourage people to generate extra electricity from sustainable and renewable sources. Electricity retailers (and certain other entities) have a legal obligation to buy and surrender certificates to the Clean Energy Regulator on a quarterly basis. The certificates come in the form of large-scale generation certificates (LGCs) and small-scale technology certificates (STCs). Electricity retailers can purchase the LGCs from renewable energy power stations and STCs from small-scale energy producers, such as households with solar panels on their roofs.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 Describe the main commercial aspects of the climate sector in your country, including any related government policies.

The primary carbon market is created by the issue of Australian carbon credit units (ACCUs) by the Clean Energy Regulator. Anyone who has an account with the Australian National Registry of Emissions Units can acquire ACCUs. Transfers of title on the Registry gives rise to the secondary market.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

The only mandatory limitation on GHG emissions is the National Greenhouse and Energy Reporting (NGER) safeguard mechanism. The safeguard mechanism requires certain large businesses to keep their GHG emissions below 'baseline' levels. The baseline levels are set by the Clean Energy Regulator. Only businesses that exceed the threshold of 100,000 tonnes of annual GHG emissions are subject to the safeguard mechanism. In practice, this only covers large businesses in the electricity generation, mining, oil and gas extraction, manufacturing, and waste sectors.

GHG emission permits or approvals

- 10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

In Australia, there is generally no direct system of GHG emission permits or approvals. Indirect regulation occurs through the state and territory environment and planning laws, and impact assessment processes.

Oversight of GHG emissions

- 11 | How are GHG emissions monitored, reported and verified?

Under the NGER Act, certain corporations are required to report information about their GHG emissions and energy use.

For each financial year, certain corporations must provide a report to the Clean Energy Regulator relating to their GHG emissions, energy production and energy consumption (NGER Act section 19(1)).

The requirement to report applies to corporations that meet one or more of the thresholds for a financial year (the 'trigger year') (NGER Act section 12(1)). The thresholds are specified in section 13 of the NGER Act. In general, they relate to the amount of CO₂-e emitted, energy produced or energy consumed. For example, a corporation will meet a threshold if it emits 50,000 tonnes or more of CO₂-e per financial year (NGER Act section 13(1)(a)(iii)).

If a corporation meets a threshold, then it must register with the Emissions and Energy Reporting System (EERS) by 31 August following the reporting year in which they first meet an NGER threshold. The EERS is a system created to receive reports on emissions and energy information. Corporations that are required to report to the EERS must do so by the statutory deadline. In 2020, this deadline is midnight AEDT Monday, 2 November 2020.

The Clean Energy Regulator administers the EERS.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

- 12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

In Australia, people can earn, buy and sell Australian carbon credit units (ACCUs). ACCUs are originally issued by the Clean Energy Regulator on behalf of the Australian government. One ACCU is earned for each tonne of CO₂-e that a project stores or avoids.

ACCUs exist as electronic entries in the Australian National Registry of Emissions Units (the Registry). This means that to own an ACCU, you need to have an account with the Registry. Each ACCU has an identification number.

An ACCU is personal property and does not have an expiry date. People can create equitable interests and security interests in ACCUs.

Registration

- 13 | Are there any GHG emission allowance registries in your country? How are they administered?

The Registry records who owns each ACCU. The Clean Energy Regulator is responsible for tracking the ownership and location of ACCUs through the Registry.

Obtaining, possessing and using GHG emission allowances

- 14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

To own, buy or sell ACCUs, you must have an account with the Registry. It is free to register for an account, and you can register through the Clean Energy Regulator's website. The registration process is free and relatively simple, requiring you to acknowledge terms and conditions, provide basic information and contact details, and set a password.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

- 15 | What GHG emission trading systems or schemes are applied in your country?

Australian carbon credit units (ACCUs) may be sold to the government through a carbon abatement contract, or to other entities on the secondary market. People can transfer the legal title in ACCUs by entry into an account in the Australian National Registry of Emissions Units (the Registry). Transfers of ACCUs are subject to requirements imposed by statute (specifically, the Australian National Registry of Emissions Units Act 2011 (Cth) and ANREU Regulations).

Trading agreements

- 16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

A Code of Common Terms exists for each of the two types of carbon abatement contracts, which are contractual arrangements that people can enter into to sell ACCUs to the Clean Energy Regulator. There are two types of carbon abatement contracts: fixed delivery and optional delivery. Each type of contract has a Code of Common Terms that sets out the rights and obligations of the parties under the contract. The Code of Common Terms is non-negotiable and anyone bidding for a carbon abatement contract must agree to it.

Under a fixed delivery contract, the contract holder agrees to provide the Clean Energy Regulator with a set number of ACCUs at a set price for the duration of the contract. Under an optional delivery contract, the contract holder has the right, but not the obligation, to sell ACCUs to the Clean Energy Regulator at an agreed price, within a set time.

SECTORAL REGULATION

Energy sector

- 17 Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

In Australia, non-renewable energy sources are black coal, brown coal, natural gas and oil. The following table gives electricity produced by fuel type in the 2017–2018 financial year, which is the latest for which information is available.

Fuel	Electricity produced (GWh)	Percentage
Black coal	121,702	46.6
Brown coal	36,008	13.8
Gas	53,882	20.6
Oil	4,904	1.9
All fossil fuels	216,497	82.9

The above information is taken from the Department of the Environment and Energy, Australian Energy Statistics (2019) Table O.

The following table gives electricity consumed by fuel type in the 2017–2018 financial year, which is the latest for which information is available. Electricity consumption is measured in petajoules (PJ). One PJ is equal to 278 GWh.

Fuel	Electricity consumed (PJ)	Percentage
Oil	2,387.8	38.7
Coal	1,847.2	29.9
Gas	1,554.6	25.2

The above information is taken from the Department of the Environment and Energy, Australian Energy Statistics (2019) Table C.

Other sectors

- 18 Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

Beyond the energy sector, the regulation of GHG emissions is generally left to the environment and planning legislation of each state and territory.

The regulation of GHG emissions in connection to the exploration and exploitation of oil, gas and minerals is the responsibility of each state and territory. The regulation is generally contained in each jurisdiction's environment and planning instruments. For example, in New South Wales (NSW), when the Minister for Planning decides to give consent for a mining project, he or she has to consider imposing conditions on the consent to ensure that 'greenhouse gas emissions are minimised to the greatest extent practicable' (see State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (NSW) section 14(1)(c)).

The regulation of GHG emissions in connection to transportation is contained in statutes directed at setting the standard for each mode of transport (eg, light vehicles, heavy vehicles, trains). For example, for light vehicles, Australian Design Rule 79/00, a legislative instrument, prescribes the exhaust and evaporative emissions requirements for light vehicles. At the state and territory level, each jurisdiction has its

own Vehicle Standards Rules (VSRs) that regulate light vehicle emissions (eg, emissions from cars). All VSRs are based on the same set of model rules called the Australian Light Vehicle Standards Rules (ALVSRs). For example, NSW's Road Transport (Vehicle Registration) Regulation 2017 (NSW) Schedule 2 section 13A(1) applies a modified version of an ALVSR. Although the ALVSR is not explicitly directed at GHG emissions, it does set out requirements to ensure that motor vehicles do not emit too much smoke (see Part 9).

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

In Australia, renewable energy is produced from hydro, wind, bioenergy and solar photovoltaic cells. Bioenergy includes energy produced from landfill biogas and industrial waste, among other things. The following table gives electricity produced by fuel type in the 2017–2018 financial year, which is the latest for which information is available.

Renewable energy production

Fuel	Electricity produced (GWh)	Percentage of all electricity production
Hydro	16,021	6.1
Wind	15,174	5.8
Bioenergy	44,643	1.3
Solar PV	9,930	3.8
All renewables	44,643	17.1

The above information is taken from the Department of the Environment and Energy, Australian Energy Statistics (2019) Table O.

The following table gives electricity consumed by fuel type in the 2017–2018 financial year, which is the latest for which information is available. Energy consumption is measured in petajoules (PJ). One PJ is equal to 278 GWh.

Renewable energy consumption

Fuel	Electricity consumed (PJ)	Percentage of renewable electricity production
Biomass	189.4	49.7
Municipal and industrial waste	4.8	1.3
Biogas	16.1	4.2
Biofuels	6.1	1.6
Hydro	57.7	15.1
Wind	54.6	14.3
Solar PV	35.7	9.4
Solar hot water	16.6	4.3
All renewables	382.1	100

The above information is taken from the Department of the Environment and Energy, Australian Energy Statistics (2019) Tables D, F and O.

Wind energy

20 | Describe, in general terms, any regulation of wind energy.

Planning and environment approvals may be required to construct or operate a wind energy project. For example, state and territory environment laws and laws that regulate land use approvals.

Government schemes exist to encourage the development of renewable power stations like wind farms. The Clean Energy Regulator administers the Renewable Energy Target (RET) Scheme, which includes the Large-scale Renewable Energy Target (LRET). This target creates a market for the creation and sale of certificates known as large-scale generation certificates (LGCs). Certain accredited power stations can create LGCs for electricity generated from its renewable energy sources, such as wind. The LGCs can then be sold to electricity retailers (and other entities with certain liabilities) to meet their compliance obligations. The LGCs operate as offsets to energy use and GHG emissions.

Another part of the RET Scheme is the Small-scale Renewable Energy Target. This target creates a financial incentive for individuals and small businesses to install certain small-scale renewable energy systems, such as small-scale wind systems. This scheme creates small-scale technology certificates (STCs), which energy retailers can use to discharge their RET compliance obligations.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

Planning and environment approvals may be required to construct or operate a solar energy project.

Government schemes exist to encourage the development of renewable power stations, such as solar farms. One such scheme is the LRET, which is administered by the Clean Energy Regulator. This scheme creates a market for the creation and sale of LGCs. Certain accredited power stations can create LGCs for electricity generated from its renewable energy sources, such as solar (see Renewable Energy (Electricity) Act 2000 (Cth) (the RET Act) section 17(1)(f)). Once someone has created an LGC, they can then sell it to electricity retailers (and other entities with certain liabilities) to meet their compliance obligations. The LGCs operate as offsets to energy use and GHG emissions.

Another part of the RET Scheme is the Small-scale Renewable Energy Target. This target creates a financial incentive for individuals and small businesses to install certain small-scale renewable energy systems, such as solar panel systems and solar water heaters. Energy retailers can use STCs discharge their RET compliance obligations.

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

Planning and environment approvals may be required to construct or operate hydropower, geothermal, wave or tidal energy projects. For example, in South Australia, the production of geothermal energy is a regulated activity under the Petroleum and Geothermal Energy Act 2000 (SA), and as such requires an environmental impact report. For another example, if a proposed tidal energy project impacted on a Commonwealth marine area (or on another matter of national significance), then the project may require assessment under the Environment Protection and Biodiversity Conservation Act 1999 (Cth).

Government schemes exist to encourage the development of renewable power stations such as hydropower, geothermal, wave and tidal energy projects. One such scheme is the LRET, which establishes a market for the creation and sale of LGCs. Certain accredited power stations can create LGCs for electricity generated from their renewable energy sources. Renewable energy sources are defined to include

hydro, wave, tide, ocean, geothermal-aquifer (see RET Act sections 17(1)(a)–(d), (g)). Once someone has created an LGC, they can then sell it to electricity retailers (and other entities with certain liabilities) to meet their compliance obligations. The LGCs operate as offsets to energy use and GHG emissions.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

Planning and environment approvals may be required to construct or operate a waste-to-energy project.

Government schemes exist to encourage the development of renewable power stations such as waste-to-energy projects. The Clean Energy Regulator administers the LRET, which establishes a market for the creation and sale of LGCs. Certain accredited power stations can create LGCs for electricity generated from its renewable energy sources. Renewable energy sources are defined to include agricultural waste, food waste, bagasse, black liquor, and gases from landfill and sewage (see RET Act sections 17(1)(j)–(s)). Once someone has created an LGC, they can then sell it to electricity retailers (and other entities with certain liabilities) to meet their compliance obligations. The LGCs operate as offsets to energy use and GHG emissions.

Biofuels and biomass

24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

The use of biofuels for transport is regulated at the state and territory level. Two states, Queensland and New South Wales (NSW), have introduced biofuel mandates. For example, in NSW, service stations and other volume fuel retailers must make sure that: ethanol is at least six per cent of all petrol sold; and biodiesel is at least two per cent of all diesel sold. Planning and environment approvals may be required to construct or operate a biomass energy project.

Government schemes exist to encourage the development of renewable power stations such as those fuelled by biomass. The Clean Energy Regulator administers the LRET, which establishes a market for the creation and sale of LGCs. Certain accredited power stations can create LGCs for electricity generated from its renewable energy sources. Eligible energy sources include biomass-based components of municipal solid waste (see RET Act section 17(1)(q)). Once someone has created an LGC, they can then sell it to electricity retailers (and other entities with certain liabilities) to meet their compliance obligations. The LGCs operate as offsets to energy use and GHG emissions.

Carbon capture and storage

25 | Describe, in general terms, any policy on and regulation of carbon capture and storage.

There are currently few large-scale carbon capture and storage (CSS) projects in Australia. Planning and environment approvals may be required to construct or operate CCS projects.

Australia is involved in the Carbon Sequestration Leadership Forum. The Forum is an international, ministerial-level climate change initiative for the development of improved and cost-effective technologies for CCS.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

26 | What are the main climate matters and regulations to consider in M&A transactions and other transactions?

In the absence of a formal carbon trading system in Australia, the nature of climate-related matters and regulations relevant to M&A transactions is predominantly driven by the subject matter of the transaction.

There are generally five categories of M&A transactions where climate change is a key consideration. Those categories comprise transactions relating to:

- renewable energy (eg, wind and solar);
- abatement projects (eg, carbon capture and storage projects);
- high-emission industries (eg, traditional electricity generation, mining, manufacturing);
- industries directly impacted by the effects of climate change (eg, agriculture); and
- value-linked assets (eg, sustainable brands).

Beyond value- or price-related matters, the key regulations relevant to M&A transactions are:

- the Emissions and Energy Reporting System under the National Greenhouse and Energy Reporting Act 2007 (Cth);
- the Emissions Reduction Fund under the Carbon Credits (Carbon Farming Initiative) Act 2011 (Cth), the Carbon Credits (Carbon Farming Initiative) Regulations 2011 (Cth) and the Carbon Credits (Carbon Farming Initiative) Rule 2015 (Cth);
- the potential impact of a carbon price and tax (in the future);
- the conditioning of development approvals under Commonwealth and state environment and planning approvals; and
- the future development restraints that are consequences of climate change regulation (eg, coastal land may no longer be made available for development, and climate change may become a mandated consideration and assessment issue in the approvals process).

UPDATE AND TRENDS

Emerging trends

27 | Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

The climate change policies of the major Australian political parties differ considerably. For example, there is limited consensus on issues such as a carbon price or tax, emissions reductions targets, renewable energy, the role of coal and gas, and electricity generation. The limited consensus impacts and constrains policy development. This variability of policy and lack of consensus will continue to be an ongoing theme in Australia's regulation of climate change.

A further trend is the increase in the involvement of states in regulating climate change. This includes establishing policy frameworks at a state level including reduction targets. For example, NSW has the Net Zero Plan, NSW Climate Change Fund and the Climate Change Policy Framework. Similarly, Queensland has a Climate Change Response, and Victoria has climate change policies through the Department of Environment, Land, Water and Planning.



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Coronavirus

28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

The situation with the covid-19 pandemic is subject to change. The most up-to-date information is available on the Clean Energy Regulator's website.

In general, the Regulator has indicated that it intends to continue with all processes, such as Emission Reduction Fund audits, ground truthing and reporting. It has indicated its willingness to be flexible with some deadlines for providing information; however, it is beyond the Regulator's power to alter certain other deadlines (eg, the deadline for energy retailers to surrender Renewable Energy Target certificates each quarter).

China

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

China is a party to the United Nations Framework Convention on Climate Change, the Paris Agreement and the Kyoto Protocol. China has formulated the National Climate Change Programme and the Special Scientific Action Plan for Climate Change. It has also issued White Papers on Policies and Actions to Address Climate Change to promote the adoption of the Beijing Declaration on the Development and Transfer of Technology to Address Climate Change and is actively promoting national legislation to cope with climate change.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

Influenced by international climate regulations, China has established a multi-tiered system for energy conservation and resource management at the central, local, industrial and enterprise levels. The state will set up a system of labelling for the resource consumption level (such as energy efficiency) of products and constantly improve it. Specific regulatory measures include the elimination of inefficient power stations and factories; environmental management, energy efficiency labelling and certification for urban and rural areas; and restraining the expansion of energy-intensive industries. China is actively promoting energy conservation and emission reduction and has reduced the use of fossil energy, vigorously developed renewable energy and developed new energy vehicles and so on. It has actively developed low-carbon agriculture and sustainable forest management for creating a carbon sink.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

China has issued the Work Plan for Greenhouse Gas Emission Control during the 13th Five-Year Plan Period, the National Plan on Responding to Climate Change (2014–2020 years), the National Strategy of Climate Adaptation and other major policy documents. Specific policy aspects are setting up financial reward funds for energy-saving technology and special funds for major pollutants emission reduction, reform of fuel consumption tax, tax preferential policy on energy conservation and cleaner production technology, control of carbon emission intensity, establishment and operation of a carbon emission trading market in China, and establishment of the information disclosure system for greenhouse gas (GHG) emission.

Main national legislation

- 4 | Identify the main national laws and regulations on climate matters.

The main laws and regulations are:

- the Energy Conservation Law;
- the Renewable Energy Law;
- the Agriculture Law;
- the Forest Law;
- the Cleaner Production Promotion Law;
- the Circular Economy Promotion Law;
- the Desert Prevention and Transformation Law;
- the Regulations on Restoring Farmland to Forest;
- the Measures for the Operation and Management of Clean Development Mechanism Projects;
- the Interim Measures for the Administration of Voluntary Transactions for Greenhouse Gas Emission Reduction Transactions; and
- the Interim Measures for the Administration of Carbon Emission Permit Trading and so on.

National regulatory authorities

- 5 | Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

Before 2018, the National Development and Reform Commission of the People's Republic of China set up the Department of Climate Change Response. This is mainly responsible for comprehensively studying the international situation and major national developments of climate change issues, analysing the impact of climate change on China's economic and social development and proposing general countermeasures. China will take the lead in formulating major strategies, plans and policies to address climate change, organise the implementation of specific measures and actions related to climate change mitigation and adaptation, organise awareness campaigns to combat climate change, and study and propose relevant laws and regulations. China will also organise the development, updating and implementation of national programmes to address climate change and guide and assist in the development and implementation of sectoral and local programmes; take the lead in national implementation of the United Nations Framework Convention on Climate Change; organise the preparation of national implementation communications; and be responsible for the preparation of national GHG emission inventories.

The Climate Change Division will study and put forward the overall policies and programmes for the participation of China in international negotiations on climate change, take the lead in formulating and implementing specific negotiating proposals, and, together with relevant parties, take the lead in participating in international negotiations and

relevant international conferences. It is responsible for formulating plans for capacity-building to cope with climate change and coordinating scientific research and systematic observation in the field of climate change. It will formulate management measures for foreign cooperation in response to climate change, organise and coordinate major foreign cooperation activities in response to climate change, carry out relevant multilateral and bilateral cooperation activities in response to climate change, and examine the sensitive data and information involved in foreign cooperation activities. It is responsible for the work of the Clean Development Mechanism (CDM), and it takes the lead in organising the review of CDM projects, supervising the activities of the China Clean Development Mechanism Fund, and organising research on the GHG emission market trading mechanism. It will take on the specific work of the National Leading Group on Climate Change and Energy Conservation and Emission Reduction, manage the response to climate change and guide and liaise with local governments in their efforts to address climate change. In 2018, the Department of Climate Change Response was transferred to the Ministry of Ecology and Environment.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 | What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

The consumption of fossil energy is the main cause of GHG emissions, and the industrial sector is the main source of emissions.

In 2015, China submitted to the Secretariat of the United Nations Framework Convention on Climate Change a national independent contribution document to address climate change. The 'Enhanced Actions on Climate Change: China's Intended Nationally Determined Contributions' promised that by 2030, carbon dioxide emissions per unit of GDP will drop by 60-65 per cent compared with 2005, the share of non-fossil fuels in primary energy consumption will be increased to around 20 per cent, and forest reserves will increase by about 4.5 billion cubic metres.

National GHG emission projects

- 7 | Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

As a developing country, China has implemented a series of emission reduction projects under the Clean Development Mechanism (CDM), including energy construction projects such as hydro, solid waste treatment, sustainable forests and a rural biogas CDM project.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 | Describe the main commercial aspects of the climate sector in your country, including any related government policies.

The Implementation Opinions on Government Procurement of Energy-Saving Products and the Notice on Establishing a Compulsory Government Procurement System for Energy-Saving Products and other policy documents have established a compulsory government procurement system for energy-saving products and implemented green public procurement. The following documents are regularly

updated: List of Government Procurement of Energy-Saving Products and List of Government Procurement of Environmental Marking Products. It stipulates that when government agencies at all levels use government funds for government procurement activities, they shall give priority to purchasing energy-saving products and carry out compulsory procurement of some products that meet the requirements for energy conservation, such as energy efficiency and performance, on the premise that technical and service indicators meet procurement needs, reducing energy costs for government agencies. It is also establishing a unified carbon market in the country and promoting carbon emissions trading among companies.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

China has not undertaken the compulsory obligation to reduce emissions under the United Nations Framework Convention on Climate Change, but promises to make voluntary emission reductions. In accordance with domestic law, Chinese private enterprises have a legal obligation to save energy and reduce emissions.

GHG emission permits or approvals

- 10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

China has not yet established a system of GHG emission permits or approvals.

Oversight of GHG emissions

- 11 | How are GHG emissions monitored, reported and verified?

The National Development and Reform Commission, in conjunction with the competent departments of relevant industries, formulates measures for the management of enterprise emission reports, and improves the guidelines and technical specifications for the accounting and reporting of corporate GHGs. The competent departments responsible for climate change are provinces and municipalities separately listed on the State Plan under the National Social and Economic Development programme, which organise and carry out data auditing and reporting. Major emission entities must report carbon emission data in a timely manner according to the regulations. Local competent departments must organise third-party verification agencies to verify the annual emission reports and supplementary data tables submitted by enterprises (or other economic organisations; all referred to as enterprises below) and to examine the emission monitoring plans. Major emission entities and verification institutions are responsible for the authenticity, accuracy and completeness of the data. The process is as follows: first, enterprises account for and report GHG emissions and related data on an annual basis in accordance with the requirements of the enterprise's GHG emission accounting methods and reporting guidelines. In addition, according to the need for quota allocation, enterprises are required to account for and report other relevant basic data not covered by the above-mentioned guidelines, and to develop and submit emission monitoring plans as required. These are used to regulate the monitoring and accounting activities of GHG emissions of relevant enterprises. Second, the local authorities organise third-party verification agencies to verify annual emission reports and supplementary data sheets submitted by enterprises and to review emission monitoring plans. Finally, the competent local authorities organise the review of the emission reports

submitted by enterprises and the verification reports and monitoring plans issued by the third-party verification agencies, and ensure the quality of the data by means of random inspection and expert review according to the actual conditions.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

- 12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

The carbon trading department under the State Council shall, according to the requirements of national GHG emission control objectives, give comprehensive consideration to GHG emissions, economic growth, industrial structures and energy structures. The major emission entities eligible for trading and other factors of the state, as well as the provinces, autonomous regions and municipalities directly under the central government, determine the total emission quotas of the state. Emission quotas will be mainly assigned for free during the initial period. Paid use of emission quotas will be introduced in due time and the proportion of paid use will be gradually increased. The carbon trading department under the State Council will reserve a certain amount of quotas from the total emission quotas for paid use, market regulation and major construction projects, etc. Earnings obtained from paid use will be spent on promoting carbon reduction by the state and relevant capacity building. The carbon trading department under the State Council will, in light of the specific circumstances of the different industries and with reference to the opinions of the relevant industry authorities, determine uniform methods and standards for free use of quotas. All provinces, autonomous regions and municipalities directly under the central government may, in light of their local realities, formulate and implement methods and standards that are more strict than the uniform national methods and standards for the free use of quotas. The carbon trading department under the State Council will be responsible for establishing and managing the carbon emission permit trading registration system (the registration system), which is used for recording the holding, transfer, payment, cancellation and other relevant information of the emission quotas. The information in the registration system shall be the final basis for determining the ownership of the emission quotas. Accounts with different functions will be respectively opened for the carbon trading department under the State Council, the provincial carbon trading departments, major emission entities, trading institutions and other market participants, etc., in the registration system. After opening accounts according to the corresponding requirements of the carbon trading department under the State Council, participants may conduct relevant business operation of quotas management in the registration system.

Registration

- 13 | Are there any GHG emission allowance registries in your country? How are they administered?

Pilot provinces and cities for carbon emissions trading have specific provisions. For example, the Measures for the Administration of Beijing's Carbon Emission Permit Trading (for Trial Implementation) stipulates that the Municipal Development and Reform Commission shall establish a carbon emission permit trading registration system for the issuance of quotas and the management of contract implementation. Major emission entities and voluntary trading units will register and manage their carbon emission rights through the register book, including the possession, transfer, alteration, surrender, offset and cancellation of carbon emission rights.

Obtaining, possessing and using GHG emission allowances

- 14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

China is drawing up an Interim Regulation of National Administration of Carbon Emission Permit Trading. Carbon emission quotas follow the principles of 'uniform industry distribution standards', 'total emission quotas in different areas' and 'flexible adjustment of reserved quotas'. The National Development and Reform Commission determines the regional total quotas according to GHG emissions, economic growth, industrial structure, energy structure and other factors, and reserves some quotas for paid distribution, market regulation and major projects construction. Local governments allocate local quotas to enterprises that control emissions in accordance with the allocation standards set by the Development and Reform Commission. Quota pledge and other programmes are being explored.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

- 15 | What GHG emission trading systems or schemes are applied in your country?

China initially focused on voluntary GHG emission reduction transactions. In 2011, seven provinces and cities (including Beijing, Tianjin, Shanghai and Guangdong) carried out pilot projects on carbon trading and tried to implement compulsory emissions reduction trading. Taking the Beijing Environmental Exchange as an example, the types of transactions include: carbon emission quotas; approved carbon emission reductions; available and approved carbon emission reductions, including certified voluntary emission reductions; carbon emission reductions for energy conservation projects; and forestry carbon sink projects carbon emission reductions.

Trading agreements

- 16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

China has regional emission exchanges, such as Beijing and Tianjin. They all have standard agreements, but they are not exactly the same. Taking Beijing as an example, the main terms are: the declaration of the two parties; opening a transaction fund account; the declaration of the transaction; deposit and withdrawal of funds; application for reservation; alteration and termination of the transaction, the authorised representative of the trader; liability and exemption clauses of the two parties; settlement of disputes; and supplementary provisions.

SECTORAL REGULATION

Energy sector

- 17 | Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

For a long time, China's energy structure has been dominated by coal and the pressure to reduce emissions is enormous. In June 2015, China pledged to reduce carbon dioxide emissions per unit of GDP by 60–65 per cent (compared with 2005) by 2030. China has enacted regulations on industrial energy conservation, construction energy conservation and transport energy conservation through the Energy Conservation Law and other relevant laws. Fujian, Jiangsu and other regions have tried out industrial projects and construction energy conservation trading systems.

Other sectors

- 18 | Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

In the industrial sector, the promotion of new low-carbon technologies and technologies strengthening the construction of energy and carbon emission management systems for enterprises and strengthening the carbon emission management of enterprises have resulted in the carbon emissions per unit of product of energy-consuming products reaching the advanced level of the world. Promoting pilot and demonstration projects of carbon capture, utilisation and storage in industrial areas do well in environmental risk appraisal. The state encourages industrial enterprises to adopt efficient and energy-saving motors, boilers, kilns, fans, pumps and other equipment as well as technologies of cogeneration of heat and power, waste heat and pressure generation, clean coal and advanced energy consumption monitoring and control, etc. It is prohibited to build any new coal-burning, fuel-burning or coal-burning thermoelectric generation facilities inconsistent with state provisions.

In agriculture, zero growth action in fertiliser usage, popularising soil testing formulas and fertilising technologies, reducing nitrous oxide emissions from farmland, controlling methane emissions from farmland, breeding improved varieties with high yield and low emissions, and improving water and fertiliser management have been implemented. There has also been farmland quality protection and improvement action, along with promoting straw for returning to the field, increasing the application of organic fertilisers, strengthening the construction of high-standard farmland and implementing the rural biogas Clean Development Mechanism project.

In transport, the state encourages the development, production and use of energy-saving and environmentally friendly cars, motorbikes, railway locomotives, ships and other vehicles, and implementation of a system for scrapping and updating old transport vehicles. The relevant department under the State Council sets down fuel consumption quotas for transport vehicles, and any vehicle that does not meet the quota may not be operated. The state encourages the development, expansion and use of clean fuels and petroleum-alternative fuels by transport vehicles.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 | Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

The state has set national long- and medium-term total targets for the development and utilisation of renewable energy, subsidising the on-grid electricity of electricity generation by using renewable energy. A voluntary subscription system for renewable energy green power certificates has been established. According to the market subscription situation, renewable energy quota assessment and green power certificate mandatory restraint transactions will be launched in 2018. Green power certificates can be formally listed on the national green power certificate subscription platform for sale. Power generation enterprises that have obtained green power certificates can formally sell green power certificates on the national green power certificate subscription platform. The subscription price will be determined by the buyers and sellers themselves through consultation or through competitive bidding according to the amount of additional capital subsidy for renewable energy pricing that is no higher than the corresponding level of the certificate.

Wind energy

- 20 | Describe, in general terms, any regulation of wind energy.

China supports the industrialisation of wind power generation equipment. It has implemented a price sharing and compensation mechanism for wind power projects and supports building the capacity for wind power technology development, establishing a National Centre for research and development of wind turbines and their components, with an emphasis on supporting the technical research and development of wind turbines and main components and the construction of test facilities. It has also implemented a value added tax and income tax reduction and exemption system for renewable energy power technology.

Solar energy

- 21 | Describe, in general terms, any regulation of solar energy.

In drawing up the annual generation plan, the government gives priority to reserving generating space for clean energy units such as hydro, wind power and photovoltaic power. It encourages the participation of clean energy generation the market, and the amount of electricity that has been determined through marketisation of direct transactions can be deducted from the power generation plan. Enterprises, specialised energy service companies and various types of power users, including individuals, are encouraged to invest in the construction and operation of distributed generation projects. Construction fund subsidies or generating capacity subsidies shall be granted to eligible distributed power generation entities. Subsidies for distributed photovoltaic power stations will be provided and financial services will be provided for the development of distributed photovoltaic power.

Hydropower, geothermal, wave and tidal energy

- 22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

China has adopted preferential value-added tax policies for large hydropower enterprises, supports and subsidises rural hydropower expansion and transformation and continues to implement low-interest loans for small hydropower.

There is a focus on supporting geothermal resource exploration and assessment, geothermal heating and refrigeration projects, and power generation and comprehensive utilisation demonstration projects. The price of electricity for geothermal power generation by commercial operation projects is subsidised. Geothermal energy utilisation projects implemented through energy performance contracting can enjoy preferential tax policies, the market guarantee mechanism for geothermal energy utilisation system has been improved and there is vigorous promotion of the development and utilisation of shallow geothermal energy.

Waste-to-energy

- 23 | Describe, in general terms, any regulation of production of energy based on waste.

The state encourages agricultural producers and the relevant enterprises to take advantage of advanced or applicable technologies to make comprehensive utilisation of crop straws, livestock and poultry excrements, by-products of the agro-product processing industry and waste agricultural films, and to develop and use biogas and other biomass energies. It promotes harmless disposal of industrial waste, construction waste, sewage treatment plant sludge and other wastes, and recovery of resources from these, and encourages the development of waste incineration and power generation in areas where conditions permit.

Biofuels and biomass

- 24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

China has formulated a preferential taxation policy on biomass energy in the Catalogue of Value-Added Tax Preferences for Products and Labour Services Involving the Comprehensive Utilisation of Resources.

Carbon capture and storage

- 25 | Describe, in general terms, any policy on and regulation of carbon capture and storage.

China's carbon capture and storage policy is in development. In 2011, China set up an oxygen-enriched combustion carbon capture test base in Wuhan and officially put it into operation.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

- 26 | What are the main climate matters and regulations to consider in M&A transactions and other transactions?

It is necessary to conduct carbon investigations for the relevant enterprises and take into account the carbon assets and their management of the enterprises.

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UPDATE AND TRENDS

Emerging trends

- 27 | Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

First, as part of administrative structural reform in China, the climate change response has been incorporated into the competence of the Ministry of Ecology and Environment. This Ministry will make a unified plan for climate change from the perspective of ecological and environmental protection.

Secondly, in the future, an important part of China's climate control will be to improve the carbon emission trading market and use a market mechanism to promote emission reduction.

Coronavirus

- 28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

The Ministry of Ecology and Environment has strengthened the supervision and control of medical sewage and urban sewage in response to the covid-19 pandemic and has issued the 'Notice on stepping up in the supervision and control of medical sewage and urban sewage during the novel coronavirus infection'. The 10 departments jointly issued a work plan for the comprehensive treatment of waste from medical institutions and technical guidelines for the management and emergency disposal of medical waste in the case of pneumonia caused by the new coronavirus infection (for trial implementation), which outline the waste disposal problems in medical institutions. In addition, the Ministry of Ecology and Environment has issued some exemptions or simplified regulations for environmental impact assessment of items and facilities related to epidemic prevention and control. These include three types of exemption from environmental impact assessment, as well as provisions for advanced, active and coordinated environmental impact assessment of service lines.

Dominican Republic

Fabio J Guzmán Saladín and Giselle Pérez-Reyes

Guzmán Ariza

MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

The Dominican Republic is a signatory of the following international agreements:

- the United Nations Framework Convention on Climate Change (UNFCCC);
- the Kyoto Protocol;
- the Paris Agreement;
- the Vienna Convention on the Protection of the Ozone Layer; and
- the Montreal Protocol on the Substance that depletes the Ozone Layer.

As a consequence of the fact that the country is a signatory of the aforementioned international agreements, it has created the necessary local regulations to comply with the requirements.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

The Dominican Republic, after the ratification of the UNFCCC, has made progress in the integration of climate change into its policy, introducing it into different aspects of society, the economy and the environment.

The National Climate Change Policy is articulated with the instruments of the National Planning System, with the National Development Strategy 2030 and with the National Pluriannual Plan of the public sector, to foster a political and institutional framework favourable to low development in emissions of greenhouse gases and resilient to climate change.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

The tax authorities together with the Ministry of Environment have not yet implemented the necessary environmental taxes to directly prevent activities that may have negative effects on the environment.

The first green tax established in the Dominican Republic was enacted in the 2012 Tax Reform. This reform established a tax on vehicles based on the percentage of the vehicle's total value and its emissions of carbon dioxide according to the following table.

CO ₂ emissions	Tax payable
Less than 120g CO ₂ /km	0%
More than 120 until 220g CO ₂ /km	1%
More than 220 until 380g CO ₂ /km	2%
Over 380g CO ₂ /km	3%

Main national legislation

- 4 | Identify the main national laws and regulations on climate matters.

The Constitution of the Dominican Republic promulgated in 2010, in its article 194, establishes adaptation to climate change as a guiding principle for the definition of territorial organisation policies, through the definition of land use plans that respond to the need to adapt to climate change. In respect to what is indicated in the Constitution, the Dominican state began designing the political framework of reference through the development of strategies and plans.

Organic Law No. 1-12 of the National Development Strategy to 2030, promulgated in 2012, indicates four strategic axes that define 'the sustainable development model to which the Dominican Republic aspires', in the institutional, social, economic and environmental spheres. Regarding the climate, the law raises as one of its objectives a production society and an environmentally sustainable consumption, 'which it manages with equity and effectiveness risks and protection of the environment and resources and promotes an adequate adaptation to climate change.'

Decree 269-15 sets out the National Climate Change Policy, which aims to manage climatic variability attributed, directly or indirectly, to human activity and the effects it generates on the population and the national territory, through an appropriate strategy, programming, plans and projects at the national level.

Decree No. 23-16, amended by Decree No. 26-17, creates the Inter Institutional Commission of High Level for Sustainable Development, responsible for mapping the route for the implementation of the 2030 Agenda for Sustainable Development and integrating the Sustainable Development Goals in all government instruments of planning, especially in the National Development Strategy 2030.

On 29 March 2017, the National Congress issued Resolution No. 122-17 approving the Paris Agreement, signed by the Dominican Republic on April 2016 in New York and adopted in Paris on 12 December 2015.

National regulatory authorities

- 5 Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

The National Council for Climate Change and Clean Development Mechanism was created by Decree No. 601-08, on 20 September 2008, with the aim of articulating and joining efforts from the different institutions that make up the sectors of development of the country to combat the global problem of climate change. It is chaired by the President of the Dominican Republic and is composed by the Heads of the Ministries of Environment and Natural Resources, Economy, Planning and Development, Agriculture, Foreign Affairs, Finance, Industry and Commerce, and Public Health. The Council also comprises members from the Central Bank of the Dominican Republic, the National Energy Commission, the Office for the Reorganisation of Transportation, the Superintendence of Electricity, the Dominican Corporation of State Electric Companies, the Association of Banks of the Dominican Republic, the Association of Industries of the Dominican Republic, the private generators of the national energy sector, the National Council of Private Enterprise and representatives of civil society organisations.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

The main sources are:

- energy: 61.9 per cent;
- industrial processes: 5.3 per cent;
- agriculture 12.9 per cent; and
- waste: 19.9 per cent.

National GHG emission projects

- 7 Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

Based on the legislation, strategies and specific plans have been created by various sectors, namely:

- the Sectoral Strategic Plan for Agricultural Development 2010–2020, of 2011;
- the National Strategy to Strengthen Human Resources and the Skills to Advance towards Green Development, with Low Emissions and Climate Resilience, 2012;
- the Strategic Plan for Climate Change 2011–2030 in the Dominican Republic, of 2012;
- the Agricultural Contingency Plan 2013; and
- the National Strategy for Adaptation to Climate Change in the sector Agricultural of the Dominican Republic 2014–2020.

The Dominican Republic has made great efforts to contribute to the reduction of global GHG emissions with projects of the Clean Development Mechanism (CDM), with a total of 14 projects registered before the United Nations Framework Convention on Climate Change and its Kyoto Protocol (KP), the last registered project being the Wind project of Los Cocos II in 2013.

Adding all the potential to reduce CO₂ emissions that have registered CDM projects, the value would amount approximately to 1,199Gg of CO₂e annually. This is already a mitigation action given by the Dominican Republic within the KP to combat climate change, which, coupled with the other actions mentioned above, confirm the commitment of the Dominican Republic to mitigate GHG emissions.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 Describe the main commercial aspects of the climate sector in your country, including any related government policies.

Commercial climate business in the Dominican Republic is fragmented, largely owing to the lack of comprehensive national climate change regulation. The National Climate Change Policy aims to provide the framework to develop this sector.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

The current air emission legal framework in the Dominican Republic is based on two main regulations: the Environmental Regulation on Air Quality and the Environmental Regulation on Control of Atmospheric Emissions from Fixed Sources.

The Environmental Regulation on Air Quality determines the maximum amount of pollutant concentration permitted. The Regulation is applicable to industries, businesses, projects, services or any activity that may cause pollution and affect air quality. Its overall purpose is the protection of public health. This regulation establishes limits for certain types of pollutants, as indicated in the following table.

Pollutant	Permitted limit	Time period
SO ₂ (sulphur dioxide)	100mg/m ³	Annual
CO (carbon monoxide)	10,000mg/m ³	8 hours
Pb (lead)	2mg/m ³	Annual

The Environmental Regulation on Control of Atmospheric Emissions from Fixed Sources determines the maximum permitted amount of atmospheric emission from fixed sources. This acts as a compliance tool to satisfy the standards set by the Environmental Regulation on Air Quality.

GHG emission permits or approvals

- 10 Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

A developer must obtain the corresponding environmental authorisation before starting any activity that may affect the environment and natural resources, including non-industrial projects. Activities are divided into four categories (A, B, C and D). Categories A and B (environmental licence and environmental permit, respectively) require a stricter environmental assessment, while categories C and D (environmental authorisation and minimal impact registration certificate, respectively) are used to regulate activities with less environmental impact.

According to the regulations on environmental authorisations, in order to obtain any permission or licence a project developer should complete the following procedure:

- submission of request of the environmental authorisation before the Ministry of Environment and Natural Resources;
- inspection by government technicians;
- issuance of the terms of reference, if applicable, which include the basis for the preparation of an environmental assessment;
- preparation and filing of the correspondent environmental assessment; and
- public hearings, for those projects with a high possibility of causing significant environmental impact. In these cases, and after such hearings take place, the public is entitled to present any comments and objections during a 15-day period.

Once these steps are completed, it is up to the Ministry of Environment and Natural Resources to issue or reject the corresponding authorisation, which will contain the compliance obligations to be followed by the developer.

Oversight of GHG emissions

11 | How are GHG emissions monitored, reported and verified?

Currently, there is no method of monitoring and verifying emissions. The inventory is made by sectoral efforts and using the Tier 1 emission factors presented in the 2006 IPCC Guidelines.

A monitoring, reporting and verification system (the MRV system) is being developed by the Dominican government's National Council for Climate Change and Clean Development Mechanism, in conjunction with the German International Cooperation Agency, with funding from the German Federal Ministry of Environment, Nature Protection and Nuclear Safety.

The MRV system will provide information on the fulfilment of the obligations established by the United Nations Framework Convention on Climate Change.

A decree is currently being drafted to regulate the method for monitoring, reporting and verification of emissions.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

No such regime exists in the Dominican Republic.

Registration

13 | Are there any GHG emission allowance registries in your country? How are they administered?

No such registries exist in the Dominican Republic, although there are plans to introduce such registries in the future.

Obtaining, possessing and using GHG emission allowances

14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

There are no standard agreements on GHG emissions allowances in the Dominican Republic and all initiatives regarding this matter are voluntary.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

15 | What GHG emission trading systems or schemes are applied in your country?

In the Dominican Republic, there is a voluntary system to reduce GHG emissions. There is no market as such – what does exist is the experience of buying carbon credits.

Trading agreements

16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

There are no standard agreements on GHG emissions trading in the Dominican Republic and all initiatives for emissions reduction are voluntary. A national award for cleaner production practices (PmL) has been introduced as a mechanism to recognise the implementation of PmL and the efficient use of resources.

SECTORAL REGULATION

Energy sector

17 | Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

For the period 2010–2015, the final energy consumption totalled a value corresponding to 5,846.31KTEP, which was provided from the different primary and secondary energy sources: biomass (12 per cent), solar (0.17 per cent), electric power (20 per cent), liquefied petroleum gas (15 per cent), gasoline (17 per cent), aviation turbine fuel (7 per cent), fuel oil (2 per cent), petroleum coke (5 per cent) and non-energy uses (4 per cent). The consumption sectors that form a significant part of the total of the useful energy consumed are the transport sector with 41 per cent, the residential sector with 24 per cent and the industrial sector with 22 per cent. The rest is attributed to the other consumer sectors.

Other sectors

18 | Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

The industrial sector is considered one of the most important sectors. According to the Department of National Accounts and Economic Statistics of the Central Bank of the Dominican Republic, there are four productive activities: the exploitation of mines and quarries, local manufacturing, manufacturing of free zones and construction. By 2012, this sector had around 8,000 companies divided into large, medium, small and micro enterprises based on the number of employees, which generate close to 400,000 direct jobs. The most important industrial branches in this sector in the country are: food and beverages with 1,316 companies (16.7 per cent); followed by the graphic industry (printing and recording) with 1,141 companies (14.5 per cent); and finally, chemical substances with 809 companies (10.3 per cent). GHG emissions from mineral production are divided into five subcategories: cement production, lime production, glass production, carbonate use processes and other mineral product processes. The emissions of mineral products

are mainly GHG emissions related to processes resulting from the use of carbon raw materials.

The most relevant source of GHG emissions reported in the third global communication of the Dominican Republic for the United Nations Framework Convention on Climate Change has been the production of cement. The GHG emissions accumulated from the minerals industry for the period 2010–2014 were equivalent to 9,359.71Gg CO₂eq. Emissions increased by 51 per cent between 1990 and 1999 (586Gg CO₂eq), after which emissions decreased slightly (by 19 per cent) until 2001. For a period of six years to 2007, industrial mineral emissions increased to 61 per cent.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 | Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

Law 57-07 on Incentives for Renewable Energy and their Special Regimes, dated 7 May 2007, regulates the concessions for alternative energies in the Dominican Republic and grants fiscal incentives for the promotion and development of wind and solar projects, among others.

Law 64-00 and its regulations regulate the environmental legal compliance of renewable energy projects and requires the obtainment of an environmental authorisation, which requires the preparation of environmental studies to determine the impacts that the project will have in its construction and operation phases. The terms of reference that the Ministry of the Environment will issue for each project will be adapted to the proposed operations.

Wind energy

- 20 | Describe, in general terms, any regulation of wind energy.

Law 57-07 on Incentives for Renewable Energy and their Special Regimes, dated 7 May 2007, regulates the concessions for alternative energies in the Dominican Republic and grants fiscal incentives for the promotion and development of renewable energy projects.

Law 57-07 is the only regulatory instrument for renewable energy projects in the country and it includes provisions for all types of renewable energy sources, including wind, solar, biofuel, biomass, hydropower, geothermal, wave and tidal energy. It also provides a wide range of incentives, including a 100 per cent tax exemption for the import of renewable energy technologies and for the transfer of industrialised goods and services related to the production of energy using renewable sources.

Solar energy

- 21 | Describe, in general terms, any regulation of solar energy.

Law 57-07 on Incentives for Renewable Energy and their Special Regimes, dated 7 May 2007, regulates the concessions for alternative energies in the Dominican Republic and grants fiscal incentives for the promotion and development of renewable energy projects.

Law 57-07 is the only regulatory instrument for renewable energy projects in the country and it includes provisions for all types of renewable energy sources, including wind, solar, biofuel, biomass, hydropower, geothermal, wave and tidal energy. It also provides a wide range of incentives, including a 100 per cent tax exemption for the

import of renewable energy technologies and for the transfer of industrialised goods and services related to the production of energy using renewable sources.

Hydropower, geothermal, wave and tidal energy

- 22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

Law 57-07 on Incentives for Renewable Energy and their Special Regimes, dated 7 May 2007, regulates the concessions for alternative energies in the Dominican Republic and grants fiscal incentives for the promotion and development of renewable energy projects.

Law 57-07 is the only regulatory instrument for renewable energy projects in the country and it includes provisions for all types of renewable energy sources, including wind, solar, biofuel, biomass, hydropower, geothermal, wave and tidal energy. It also provides a wide range of incentives, including a 100 per cent tax exemption for the import of renewable energy technologies and for the transfer of industrialised goods and services related to the production of energy using renewable sources.

Waste-to-energy

- 23 | Describe, in general terms, any regulation of production of energy based on waste.

Law 57-07 on Incentives for Renewable Energy and their Special Regimes, dated 7 May 2007, regulates the concessions for alternative energies in the Dominican Republic and grants fiscal incentives for the promotion and development of renewable energy projects.

Law 57-07 is the only regulatory instrument for renewable energy projects in the country and it includes provisions for all types of renewable energy sources, including wind, solar, biofuel, biomass, hydropower, geothermal, wave and tidal energy. It also provides a wide range of incentives, including a 100 per cent tax exemption for the import of renewable energy technologies and for the transfer of industrialised goods and services related to the production of energy using renewable sources.

Biofuels and biomass

- 24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

Law 57-07 on Incentives for Renewable Energy and their Special Regimes, dated 7 May 2007, regulates the concessions for alternative energies in the Dominican Republic and grants fiscal incentives for the promotion and development of renewable energy projects.

Law 57-07 is the only regulatory instrument for renewable energy projects in the country and it includes provisions for all types of renewable energy sources, including wind, solar, biofuel, biomass, hydropower, geothermal, wave and tidal energy. It also provides a wide range of incentives, including a 100 per cent tax exemption for the import of renewable energy technologies and for the transfer of industrialised goods and services related to the production of energy using renewable sources.

Carbon capture and storage

- 25 | Describe, in general terms, any policy on and regulation of carbon capture and storage.

Currently, work is being done on the design and development of the Reduction of Emissions from Deforestation and Degradation programme, the promotion of conservation, the sustainable management of forests and the increase of forest carbon reserves as part of the United Nations Framework Convention on Climate Change.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

26 | What are the main climate matters and regulations to consider in M&A transactions and other transactions?

The main difference between acquiring shares and purchasing an asset is that the purchaser of the shares will acquire them along with all the liabilities associated with those shares (ie, any company liability to the extent of the amount of shares acquired). Alternatively, in an asset purchase, the purchaser would only acquire the liability associated with that asset.

Nonetheless, from an environmental perspective, it is necessary to determine the type of asset acquired, since an asset could hold liability for environmental damage (ie, the extent of the liability could encompass the real estate where the damage occurred).

Furthermore, in M&A transactions, it is important to pay special attention to the consequences of the strict and joint civil liabilities regimes for environmental damage and to the validity of environmental licences. In general, the following issues should be reviewed:

- environmental authorisations (scope and conditions);
- environmental compliance of the corresponding authorisation before the Ministry of Environment;
- technical compliance reports; and
- investigations of civil and criminal suits related to environmental damage.

Under Dominican law, a seller is not required to disclose environmental problems to the purchaser in a merger or takeover transaction. Nevertheless, such disclosure is normally required by contract and covered by warranty clauses.

Environmental provisions set forth in the Dominican Environment and Natural Resources Law are of public policy; therefore, any agreements between the parties that minimise liability in the case of environmental damage will have no effect on third parties. However, it is possible to limit liability to an agreement between the parties, but such provisions will only be valid between them.

UPDATE AND TRENDS

Emerging trends

27 | Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

There are no updates at this time.

Coronavirus

28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

The government has established a general protocol to reduce the spread of covid-19 in working areas and public places. Additionally, many specialised industries, such as free zones and tourism, have their own protocols, addressing every relevant issue for them.

We are expecting a regulation from the Ministry of Environment and Natural Resources regarding the use and disposal of gloves and masks, and their final destination, without affecting the environment or being contagious for humans.

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

Paris Agreement

Germany is party to many international treaties on climate matters. An important treaty is the Paris Agreement, which is part of the UN Framework Convention on Climate Change (UNFCCC) and succeeds the Kyoto Protocol. The Paris Agreement entered into force in November 2016 and 55 countries (issuing at least 55 per cent of the worldwide emissions) ratified it, making it legally binding. Almost all states worldwide have now ratified the Agreement (the United States, Iran and Turkey are a few exceptions). The parties to the Agreement undertake to limit the temperature increase to well below 2°C above pre-industrial levels and pursue the more ambitious limit of a 1.5°C increase. To achieve this, almost all states set up 'Intended Nationally Determined Contributions' (INDCs) in 2015. As of 2018, every five years, the plans are reviewed to ascertain whether the states have met their objectives and to determine new contributions, which have to be more aspirational every time ('ambitious mechanism'). The parties set a new deadline for 2020 to update their INDCs.

German Climate Plan 2050 and Climate Protection Package

Germany has developed a climate change long-term strategy as required by adopting the 'Climate Plan 2050' only 10 days after the Paris Agreement entered into force. The plan implements the obligations of the Agreement by setting national climate protection measures, for example the reduction of greenhouse gases (GHGs) until 2050 by 5–20 per cent compared with 1990. Each individual economic sector is allocated its own set climate target. In addition, the German Climate Protection Package of autumn 2019 provides for a bundle of measures aimed at steeply reducing GHG emissions.

Montreal Protocol

On the basis of the Montreal Protocol, the EU adopted the 'F-gas Regulation' to reduce emissions of fluorinated GHGs that have a global warming effect up to 23,000 times greater than CO₂. The F-gas Regulation is directly applicable in all EU member states. It limits the placing on the market of hydrofluorocarbons and products and imposes conditions on the use of products and equipment that contain F-gases. By 2030, it aims to cut the EU's F-gas emissions by two-thirds compared with 2014 levels, which would slow down global warming considerably.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

The 20-20-20 goals of the EU

According to the 2020 Climate and Energy Package, EU member states have to cut their GHG emissions by 20 per cent (compared with 1990 levels), increase their use of energy from renewables by 20 per cent and improve energy efficiency by 20 per cent by 2020. The EU further undertakes to reduce GHG emissions by at least 40 per cent by 2030 compared with 1990, to comply with the Paris Agreement.

German goals

Germany will achieve the EU's 2020 cut in GHG emissions. Yet, it had set the more ambitious goals of cutting emissions by 40 per cent in 2020 and by 55 per cent in 2030. Currently, only an emissions reduction of 32 per cent by 2020 is expected. Regarding the 2020 Climate and Energy Package goals, the government has issued the programme 'Climate Protection 2020' encompassing further measures. To implement the Paris Agreement, Germany has a long-term strategy (Climate Plan 2050) with the goal of cutting climate-damaging emissions by 80–95 per cent by 2050.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

Phase-out of coal-fired power plants

In Germany, the mining of black coal ended in 2018. To further reduce CO₂ emissions, the German government launched a Commission to develop a strategy for the phaseout of coal-fired power plants all together. In its final report (January 2019), the Commission recommended a step-by-step withdrawal, with the last German power plants to be decommissioned by 2038. By 2022, the capacity must be reduced by 30GW and by up to 17GW until 2030. In 2032, a review must be performed on whether the last power plants can be taken off the grid earlier than 2038. The phaseout should not harm either power consumers or energy companies. Based on recommendations of the Commission on economic, social and structural side measures, the government adopted a bill strengthening the 'structures' in the coal areas by subsidies and other measures in summer 2019. In July 2020, the Bill on the Fossil-fuel phase-out became law.

German Climate Protection Act

The German Climate Protection Act entered into force in December 2019. It aims to achieve the 2030 climate target of a 55 per cent reduction in emissions. All sectors (eg, traffic or industry) will be assigned a fixed saving target to be reached and fixed amounts of annual CO₂ emissions. Under the Act, each ministry decides on measures to achieve

the required reductions. Moreover, the government decided on further reduction measures that still have to be implemented.

Main national legislation

4 Identify the main national laws and regulations on climate matters.

Industrial installations

One of Germany's key pieces of legislation regarding climate matters is the Greenhouse Gas Emissions Trading Act and pertinent regulations and guidelines. On the basis of the new regulations for the fourth trading period (2021–2030), industrial operators submitted their applications to the national emissions trading authorities by the end of July 2019 and are currently awaiting decisions on the allocation of allowances. Another important regulation is the Renewable Energy Sources Act, aimed at the sustainable development of energy supply. The share of electricity generated from renewable energies in gross electricity consumption is to increase to 40–45 per cent by 2025, 55–60 per cent by 2035 and at least 80 per cent by 2050.

Car traffic

Germany has implemented the EU Air Quality Directive imposing limit values for particulate matter, NO₂ and CO₂ from car traffic. Yet, in many German cities these limits have been clearly exceeded for several years so that the European Commission has initiated infringement proceedings against Germany. A German environmental NGO has in an unprecedented way sued these cities aiming at mandatory measures to reduce the emissions from car traffic. Ultimately, cities like Stuttgart and Hamburg had to issue local driving bans especially for older diesel cars. These cars were found in the 'Diesel scandal' to exceed the limits allowed per vehicle and, thus, disproportionately contribute to the exceedances. Further driving bans in other cities are expected unless other measures are taken to reduce traffic emissions.

National regulatory authorities

5 Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

Ministries

In Germany, the responsibilities for climate regulation are split between the Federal Ministry for the Environment and the Federal Ministry for Economic Affairs and Energy.

Environment Agency

The Environment Agency gathers data concerning energy generation, consumption and environmental impacts. It commissions expert opinions and provides policy advice to the public sector and information to the public.

Network Agency

The Network Agency is competent for approval proceedings for the 380kV networks intended to transport electricity from the windy North of Germany to the more industrialised South. In August 2019, it auctioned the frequency blocks for the 5G mobile broadband system. The auction ended after numerous bidding rounds with total proceeds of approximately €6.6 billion. With regard to the promotion of renewable energies, the Network Agency organises tender procedures for capacities of electricity from renewable energy sources and determines the level of remuneration for electricity generated from the various renewable energy sources. The competition among bidders in the tender procedures relates to the guaranteed feed-in tariff per kWh for 20 years.

Emissions Trading Agency

The Emissions Trading Agency (DEHSt) handles all matters regarding emissions trading of industrial installations and energy producers under the European Union Emissions Trading Scheme (EU ETS) including allocation, exchange of data with the European Commission (such as the list of installations covered by the EU ETS and the number of allowances applied for) and related litigation. It further manages a compensation scheme for the extraordinary financial burdens imposed on operators by the energy turnaround. Ultimately, DEHSt is also 'Designated National Authority' for Clean Development Mechanism projects and the 'Designated Focal Point' for Joint Implementation projects.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

6 What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

National emissions

In 2018, Germany released in total 868.7 million tonnes GHG into the atmosphere. Renewable energies have, according to the Environmental Agency, avoided approximately 184 million tonnes of CO₂ equivalent. Among GHGs, CO₂ has the biggest share with around 88 per cent.

Combustion of fossil fuels

The main source of emissions in Germany is the combustion of fuels releasing GHG emissions (ie, energy-related emissions) (84.5 per cent), followed by industrial processes (7.1 per cent), agriculture (7.3 per cent) and waste treatment (1.1 per cent) (all figures relating to 2017). Energy-related emissions encompass generation of electricity (40 per cent), and heating and traffic (60 per cent). Emissions from certain industrial operations are capped by the national ceiling set by the European Commission under the European Union Emissions Trading Scheme (EU ETS) and progressively reduced.

Coal-fired power plants

Germany currently has more than 100 coal-fired power plants with a capacity greater than 100MW. As Germany is phasing out nuclear energy and simultaneously is obliged to reduce CO₂ emissions from power plants, a boost of energy from renewable energy sources is necessary. Under the draft Climate Protection Act, Germany undertakes to reduce CO₂ emissions from all sectors by 80–95 per cent by 2050. The Climate Protection Act obliges the public sector, not private parties.

F-gases

F-gases together with solvents accounted for 1.7 per cent of the German GHG emissions in 2017. They are used in daily products such as in insulating materials, climate installations and fire extinguishers. Limits in products are regulated in the EU F-Gas Regulation and address producers and distributors.

National GHG emission projects

- 7 | Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

Climate Protection Package

In autumn 2019, the German government issued a 'Climate Protection Package' entailing investments of €54 billion to be spent by 2023 encompassing various actions. For CO₂ emissions caused by car traffic or domestic heating a rising price has to be paid as of 2021 (ending at €35 in 2026). Fossil fuels for car traffic and heating will, thus, become more expensive. After 2026, these emissions are to be integrated in the EU or a German ETS. Further, the installation of 1 million charging stations for electrical cars by 2030 is subsidised, the costs for train tickets are reduced and air travel charges will be increased. Carbon emissions reductions in housing are incentivised as well as the replacement of oil-fired with more climate-friendly heating systems.

Industrial installations and the EU ETS

Industrial installations subject to the EU ETS are preparing for the fourth trading period (2021–2030) with a further reduced cap of total emissions allowances, progressively sinking numbers of allowances and the phaseout of exemptions.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 | Describe the main commercial aspects of the climate sector in your country, including any related government policies.

Nuclear phase-out and consequences

The German government decided the day following the Fukushima nuclear accident in 2011 to phase out nuclear energy. Since then, 10 out of 17 nuclear plants have been decommissioned and the last one will be phased out in 2022. Consequently, Germany depends on energy generated by either coal- or gas-fired power plants or from renewable energy sources. Since coal-fired plants will also be phased out by 2038, renewable and other carbon-neutral energies have to fill in the gap and the high-voltage grids are needed to bring electricity to southern Germany.

Electricity from renewables

In 2018, renewables provided approximately 17 per cent of the final German energy consumption. Germany offers various economic incentives to promote renewable energy generation and thereby reduce fossil fuels and GHGs. Producers of electricity from renewable energy sources feed it into the transmission grid and receive a fixed feed-in tariff per kWh for 20 years from the transmission system operators. The difference between feed-in tariffs and prices at the spot market at the European Electricity Exchange is shifted to electricity consumers as part of their electricity price. The mechanism promotes the expansion of renewables. Producers can also sell their 'green electricity' directly on the spot market and can claim a market and management premium.

Subsidies and tax incentives for electric cars and decarbonisation

Subsidies in the amount of €4,000 are granted for the purchase or leasing of certain new battery-electric vehicle and fuel cell vehicle models. For plug-in hybrids that are rechargeable from the outside, an environmental bonus of €3,000 is granted. Electric car owners do not have to pay taxes for up to 10 years after the registration of their vehicle. Under the Climate Protection Package further subsidies are foreseen.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

Emissions control

Under the German Emissions Control Regulations and the Technical Instruction on Air Pollution, limit values are set for certain emissions of industrial plants at defined measurement conditions. If such limits are violated several times or regularly the emissions control authority can enforce compliance and impose sanctions on the operator.

European Union Emissions Trading Scheme

Further, the duties under the European Union Emissions Trading Scheme (EU ETS) apply to certain listed industrial activities releasing GHG emissions. The installations performing such activities require an amount of allowances corresponding to their GHG emissions. Upon application, the Emissions Trading Agency allocates a number of cost-free allowances to the industrial activities for the relevant trading period. Since the number of available cost-free allowances is progressively reduced the operators must either invest into CO₂-reducing technologies or acquire the missing allowances.

Reduction of cap

The allowances available EU-wide are reduced every calendar year, for example in the trading period 2021–2030 by 48 million allowances each year (the EU-wide cap, thus, decreasing from 1.8 billion certificates in 2021 to 1.3 billion certificates in 2030).

GHG emission permits or approvals

- 10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

Emissions control permit

The operator first needs a permit for the industrial activities under the Emissions Control Act containing overall emissions limits. With regard to GHG emissions the operator must have a GHG emissions permit which is, for old existing plants the (same initial) permit under the Emissions Control Act.

GHG emissions permit

For newer installations a separate permit under the Emissions Trading Act is required. The operator must submit, together with the permit application, a description of the activity, location, type and scope of activity and applied technologies. Also, the sources and quantities of emissions and the commissioning date have to be provided. In the case of complex installations additional (technical) documentation on the relevant parts, process steps and ancillary installations is to be submitted.

Oversight of GHG emissions

- 11 | How are GHG emissions monitored, reported and verified?

Each year in March, operators of installations subject to the EU ETS determine their total GHG emissions of the previous year. They submit the data for verification to acknowledged bodies and the verified data to Emissions Trading Agency, which transfers them to the EU registry. In April, the operators surrender the required allowances for their emissions of the previous year, which is shown in their account in the EU registry.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

- 12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

Allowance regime

The aim of the European Union Emissions Trading Scheme (EU ETS) is to cost-effectively reduce GHG emissions. In the third trading period an overall EU cap with the allowances then allocated to single EU member states was established. This cap is reduced every year so that by 2030 a total reduction by 43 per cent compared with 2005 levels is reached. As a result, the costs for GHG emissions are expected to rise, while emissions decrease. For each tonne of CO₂ that a company emits, it has to surrender one emission allowance. Some operators receive a limited number of allowances cost-free. If operators emit more GHGs than covered by allowances, they have to purchase allowances from other operators, in auctions or on the spot market. This results in a trading price for CO₂ as an always scarcer commodity on the market and a general incentive to reduce emissions through technology.

Validity

Emissions allowances are allocated to activities or installations by an administrative decision, which, according to precedents of the European Court of Justice, can be corrected by the Emissions Trading Agency (DEHSt), also retroactively within a trading period. The German courts in most cases decide in favour of DEHSt since even retroactive withdrawals of allowances serve the overarching objective of reducing GHG emissions.

Registration

- 13 | Are there any GHG emission allowance registries in your country? How are they administered?

Union registry

In the third trading period (2013–2020) of the EU ETS a 'Union registry' was established. It is the central register for GHG emission allowances of all 31 countries that participate in the EU ETS. All allowances issued under the EU ETS are precisely recorded in this registry.

National registries

In addition, national registries exist, which, in Germany, are administered by DEHSt. Allowance trading can only be done on the level of national registries.

Mechanism

Each year in March, operators of installations subject to the EU ETS determine their total GHG emissions of the previous year. They submit the data for verification to acknowledged bodies and the verified data to DEHSt, which transfers them to the Union registry. In April, the operators surrender the required allowances for their emissions of the previous year, which is shown in their account in the Union registry.

Obtaining, possessing and using GHG emission allowances

- 14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

Allocation

Emissions allowances are allocated to existing installations upon application by DEHSt for the following trading period according to applicable

regulations. The application deadline for the fourth trading period was the end of June 2019. For new installations an application has to be submitted before they become operational. The operator must provide relevant descriptions and verified data regarding the relevant installation, processes and technologies, raw and other materials releasing GHGs, emissions, their sources and planned measures for monitoring and reporting. In its allocation decision DEHSt delimitates the activities performed and emissions of the installation, sets out the monitoring plan, conditions for reporting and the obligation to surrender a number of allowances corresponding to the emissions generated in the previous year and states, where applicable, further duties or conditions.

Administering allowances

Emissions allowances are held in the operator's account at the national registry. They are transferable by a purchase of rights contract, but the transfer must also be entered in the national registry. Without the latter the transfer is not effective. An entry in the German registry is presumed to be correct (like the land registry). Allowances are now also fully transferable to the next trading period. Surrender of allowances occurs via reporting to the Emissions Trading Agency and leads to their expiry. Pledges can be created on allowances but must also be entered into the German registry.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

- 15 | What GHG emission trading systems or schemes are applied in your country?

There is no regulatory scheme for emissions trading; the trade occurs based on contracts regulating numbers, price, duration and further stipulations.

Trading agreements

- 16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

There are more and more contract models for trading emissions allowances – either specific contracts for emissions trading or general contracts with appendices tailored to emissions allowances. Examples are the English Agreement for the Sale and Purchase of Allowances on the one hand and the ISDA Agreement with the ISDA Allowances Appendix (similarly the EFET Allowances Appendix) or the Emissions Trading Master or the Emission Allowances Single Trade Agreement for the EU Scheme of the 20-year old IETA on the other hand. In Germany a Master Agreement for Financial Derivative Transactions is available combined with an Annex for Commodities Transactions (including emissions allowances) used between banks and with additional clauses for non-bank purchasers. Single transactions can be agreed orally, but are usually confirmed in writing. The master agreement can only be terminated for cause, which extends to the individual transactions ('single agreement concept').

SECTORAL REGULATION

Energy sector

- 17 Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

Energy production

Conventional energy production in Germany was in the past primarily based on lignite, followed by coal and nuclear and natural gas. Energy generated from these sources was also exported. Energy production, however, is currently undergoing substantial changes: coal mining had already ceased by the end of 2018 and nuclear energy is being phased out by 2022. While Germany is still the biggest producer of lignite worldwide (despite shrinking quantities), mining activities will probably end by 2038. In 2018, 22.5 per cent of German electricity was still generated from lignite (166.3 million tonnes).

Energy consumption

The German primary energy consumption in 2018 was split between crude oil (34.1 per cent), natural gas (23.5 per cent), lignite (11.5 per cent), coal (11.1 per cent) and nuclear energy (6.4 per cent). Crude oil and natural gas are mainly used for heat supply and transportation, while coal serves mainly for electricity generation. Since Germany has hardly any of its own crude oil it must be imported. This applies correspondingly to natural gas, where consumption exceeds the production rate. Both natural gas and coal are mainly imported from Russia.

GHGs

GHGs are mainly generated by the combustion of fossil fuels. In 2017, 84.5 per cent of GHGs related to energy generation and 15.5 per cent related to industrial processes, waste incineration and agriculture.

Regulations

GHG emissions have been reduced by around 27 per cent since 1990, among other things because of the decommissioning of industrial plants and the increased use of renewable energies.

Energy savings

Owing to the particularly high energy costs in Germany operators have a vital interest in energy savings and the use of intelligent technologies. Energy savings in energy and industrial installations are further required and incentivised by various regulations (no trading schemes). For example, the EU Industrial Emissions Directive obliges operators to implement the best available techniques over time and correspondingly upgrade and modernise their installations (including energy efficiency measures). Domestic energy savings and instruments are often subsidised by the government (insulation, smart metering, smart home) or imposed by eco-design requirements, but the bulk of energy saving is due to the expansion of electricity generated from renewable energy sources.

Other sectors

- 18 Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

Agriculture and forestry

In 2016, agriculture and forestry accounted for approximately 7.2 per cent of the German GHG emissions either caused by animals and use of their

manure or when converting or ploughing carbon-rich soils in forests or grasslands. To address the latter the EU has adopted a regulation directly applicable in Germany to preserve grasslands and forests by prohibitions to convert or plough them and subsidies for extensive use of grasslands and re-forestation.

GHG by exploitation of fossile fuels and industrial processes

GHGs generated when exploiting fossile fuels and minerals are subject to the European Union Emissions Trading Scheme (EU ETS) as well as the industrial activities (accounting for 7.1 per cent of the GHG emissions in 2017) listed in the Annex to the German Emissions Trading Act.

Waste-to-energy

Waste incineration accounted for 1.1 per cent of the German GHG emissions in 2017. This low figure and a reduction of almost 73 per cent of GHG emissions since 1990 are a result of a successful restructuring of the waste management sector phasing out landfilling of untreated wastes, consistent waste separation and energetic use of wastes. Waste-to-energy plants exceeding 20MW of rated thermal input are subject to emissions trading.

Transportation

Aviation has been included in the EU ETS despite the fierce resistance of the US and China; the shipping sector is likely to follow despite being even more complex. Railways are considered the 'greenest' means of transport, hence why there is no discussion of GHG in this sector. The traction current of Deutsche Bahn is by 40 per cent supplied from renewable energy sources. Car traffic is still a major contributor of GHG in transportation. Yet, the reductions are not addressed in a single regulation but by a variety of measures.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

Figures

In connection with the 'energy turnaround' in 2011 as a reaction to the Fukushima nuclear disaster, Germany vigorously promoted and expanded energy generation from renewable energy sources. In 2018, a total of 428TWh were generated from renewable energies. The share of electricity generated from renewable energy sources increased from 20.1 per cent in 2011 to 37.8 per cent in 2018. In the heating sector, renewable energy rose to 13.9 per cent in 2018, while the share in the transport sector remained at a similar level (5.6 per cent). In total, the share of renewable energies in the final energy consumption across all sectors amounted to 16.6 per cent in 2018 (2011: 12.2 per cent).

Policy

The Renewable Energies Act of 2000 has been a successful instrument in fostering the increase of energy generated from renewable energy sources. The mechanism of the law is that energy from renewable energy plants is fed into the public electricity grid and the operators receive a determined remuneration from the transmission system operators. They sell the injected electricity on the electricity exchange. Because the price received on the exchange is below the determined remuneration rate for renewable energy plant operators, the differential

amount is shifted onto each electricity consumer. In 2019, the average apportionment amounts to 6,405ct/kWh.

Direct marketing

Alternatively, renewable energy installation operators can also market the power directly. In that case, the difference between the price obtained at the exchange and the feed-in remuneration is compensated by a market bonus ('market bonus scheme'). The distribution system operator pays the market bonus to the plant operator.

Wind energy

20 | Describe, in general terms, any regulation of wind energy.

Figures

In 2018, wind energy made the largest contribution to electricity generation from renewable energy sources (111.6TWh), compared to 46.5TWh in 2011. Germany ranks third worldwide regarding installed onshore capacity, behind China and the United States. In 2011, the output was still 46.5TWh. In 2017, almost 2,000 offshore wind turbines were installed off the German coast in 20 offshore wind farms with a combined capacity of approximately 5,387MW.

Permit

The approval procedure for wind parks depends on the quantity of the planned installations. Less than 20 plants can be permitted in a simplified procedure under the Emissions Control Act without public participation. In that case, only an abbreviated environmental impact assessment is to be performed. In the case of public participation, typical objections against wind parks are nature protection issues. Often the collision risk of protected birds (such as the red kite) are issues as well as wind parks establishing an obstacle to the flight routes of many birds.

Current slowdown

The number of wind energy plants put into operation has now decreased dramatically. In the first quarter of 2019 only 41 wind energy plants went into operation (compared to 300 plants in the first quarter of 2018). Reasons for this decline may be the long permit procedures (approximately one year) and increasing resistance against new projects.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

Figures

In 2018, electricity generated from photovoltaic (PV) installations benefited from record results of sunshine hours and solar radiation, rising to 46.2TWh. The total number of new photovoltaic installations has been steadily increasing for many years. The share of PV in the final electricity consumption was 7.1 per cent in 2018, while in 2011 it was still 3.2 per cent.

Permit

In general, it is not necessary to obtain planning permission for a PV plant, as long as they are built on roofs or fronts. Open area photovoltaic installations require building permits under the Construction Acts of each federal state. In the state of Hessen, for example, a permit is required for photovoltaic plants exceeding 10m².

Subsidies

Both small and large solar systems are supported by the market incentive programme of the Federal Ministry for Economic Affairs and Energy. Homeowners who switch to a heating system using solar power or optimise their heating system receive governmental subsidies (€2,000–€4,500). Also, companies that set up renewable energy systems

with a rated power greater than or equal to 100kW may obtain federal subsidies. Electricity generated from photovoltaic installations is remunerated under the Renewable Energies Act and depends on the award values from two years ago (currently it is 8,91ct/kWh).

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

Hydropower

In Germany, hydropower is less important than, for example, in Austria or Switzerland. Owing to a long period of drought in 2018, electricity generation from hydropower was with 16.5TWh at the lowest level since 1991. The share of hydropower in total electricity consumption fell below 3 per cent.

Permit

Approvals for hydroelectric power generation are governed by the water laws and regularly limited in time. Environmental issues have become the biggest restrictions for the use of hydropower.

Geothermal energy

With a total of 0.172TWh, geothermal energy increased by 5.5 per cent in 2018 for heating purposes and for generation of electricity from hot waters. The share of geothermal, however, remains marginal in the final electricity consumption in Germany. Owing to damages caused by geothermal drillings in southern Germany the public is rather reluctant to accept deep drillings.

Permit and subsidies

Deep drillings for geothermal purposes and the later operations require permits under the mining and water laws. Energy from geothermal plants is remunerated with 25.20ct/kWh. Further support is provided by the market incentive programme, which subsidises the replacement of old with new heating systems generating heat from renewable energies.

Tidal energy

Tidal energy plays a subordinate role in Germany due to shallow waters and weak currents in the North and Baltic Seas. Germany, however, is involved in the international research project 'Seafloor' together with the UK, which is geared at developing (export) technologies adapted to marine conditions. Researchers are using tidal currents off the coast of Cornwall to generate electricity.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

Figures

Waste-to-energy is the thermal recovery of waste, which is, in a closed cycle economy, the option preferred to landfilling or simple incineration. Often, heat and power are coupled. As a result, the energy performance of waste-to-energy plants can be over 80 per cent. One tonne of waste generates about 600kW of electricity. Further, the waste volume is also reduced to 10 per cent (slag, fused metals, which can be reused). Waste-to-energy is currently applied in 18 plants in Germany and neighbouring countries. It generated electricity for around 700,000 households in 2017 (approximately 3.5 millionMWh of process steam and district heating). Currently, waste-to-energy plants are a bottleneck for the huge waste quantities available in the market. As a result, there has been a drastic increase in price.

Permit

Waste-to-energy installations require a permit under the Emissions Control Act with prior public participation. They are, thus, typically subject to resistance by neighbours, environmental NGOs and competing industrial players. There are no specific subsidies or incentive schemes.

Biofuels and biomass

- 24 Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

Biofuel figures

In 2018, sales of biofuels increased by almost 5 per cent to a total of 31.6TWh and making up a share of biofuels in renewable energies of 7 per cent.

Permit

Starting materials for biofuel production, such as sugar beet, soy products or wood (renewable raw materials), must meet certain sustainability standards (ie, no soils of high biodiversity or high carbon content can be used).

Biomass figures

In 2018, around 51.3TWh electricity were generated from biomass. Solid biomass (mainly wood) featured the most important share of renewable energies in the sector heat supply. The share of biomass in generation of renewable energies was 22 per cent in 2018.

Permit

Depending on the combustion heat output and the type of fuel, combustion plants are generally subject to permitting procedures under the Federal Emissions Control Act. Depending on the type of fuel an environmental impact assessment needs to be performed. Domestic small combustion plants less than 1MW can be operated without a permit, but the operator has to report on their duties.

Subsidies

For the generation of electricity from biomass an increased basic remuneration is guaranteed for 20 years. The remuneration depends on the rated power. If the rated power is up to 150kWh, the remuneration amounts 13.32ct/kWh; with a capacity of up to 500kWh it is 11.49ct/kWh.

Carbon capture and storage

- 25 Describe, in general terms, any policy on and regulation of carbon capture and storage.

Carbon capture and storage

Carbon capture and storage (CCS) is generally seen as a promising technology to combat climate change. CO₂ could be captured in industrial pre- or post-combustion or oxyfuel processes and stored in depths exceeding 1,000 metres below the surface. According to experts, CCS could contribute to a 14 per cent reduction of CO₂ by 2050. Nonetheless, CCS is far from reaching its full potential. Germany enacted a law on the testing and demonstration of CCS technology in 2012; yet, comparable to deep geothermics or fracking, CCS encounters broad public resistance in view of the long-term storage. For large combustion or gas turbine plants generating electricity (greater than 300MW) the possibility of CCS must be tested by law.

Projects

Some CCS projects in northern Germany have been either stopped or abandoned while CCS is currently tested on a pilot scale in a few coal-fired power plants.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

- 26 What are the main climate matters and regulations to consider in M&A transactions and other transactions?

Energy

In transactions climate and energy-related issues play an increasing role. The standard programme should, therefore, encompass a review of energy demand and supply as well as new taxes or charges on energy production or consumption. Use and remuneration of renewable energy sources should be carefully reviewed. Also, energy-intensive industries carrying the burden of the German energy turnaround may be eligible for substantial subsidies or compensation of energy costs.

Emissions trading

The conditions of emissions trading (if applicable to an installation), in particular in the new trading phase starting in 2021, and its continued expansion to new sectors (after aviation, shipping and possibly other sectors of traffic) should be considered. The rising price for CO₂ emissions may also trigger technical upgrades or changes in an installation. Some technologies may, in the mid- or long-term, have to be phased out altogether. Due diligence must further extend to ongoing litigation of the relevant target company in relation to these matters. Allowances, subsidies or issues are generally linked to the operations and company so that no transfer is required in the case of a share deal.

Climate change

The changing climate becomes relevant in transactions where, for example, low temperatures are required or water is needed for industrial operations. During droughts water supplies may become expensive and exceptional permits may be required for extracting water from rivers or from the underground. Climate and energy issues are not only reshaping current industrial operations, but will also impact on their value and future.

UPDATE AND TRENDS

Emerging trends

- 27 Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

Decarbonisation of traffic

A bundle of different instruments is either in place or to be adopted in the near future to reduce GHG emissions in car traffic. First, vehicles with high CO₂ emissions are increasingly being banned from German cities after an unprecedented wave of court actions initiated by a German environmental NGO based on exceedance of limit values of an EU air quality regulation. One reason for these exceedances was manipulated measurements of the exhaust gases by car manufacturers (the 'Diesel scandal'). All this has led to a turnaround in the production and the use of cars in cities: electrical cars are heavily incentivised, the cost of public transport has been reduced and the infrastructure for public transport is being reinforced and expanded.

Automated driving

The German government changed the laws to enable the development, testing and marketing of semi-autonomous cars (level 3) in Germany. Autonomous driving is seen as a cornerstone of future public transport, increased safety and smarter traffic control in cities. German car manufacturers are currently testing pilot cars on certain routes. The German Ethics Commission on Automated Driving has developed guidelines for the programming of automated driving systems to reconcile autonomy

and liability of drivers with the advantages and interests of car manufacturers, insurance companies and data processors.

Overall reduction of allowances under the European Union Emissions Trading Scheme

By further reducing the number of cost-free emissions allowances for industrial operators the European Union Emissions Trading Scheme (EU ETS) does not only increase the CO₂ prices, but also stimulates technical progress, use of lower-emission fuels and efficiency of operations.

Inclusion of further sectors into the EU ETS

Shipping traffic is the next big sector to be integrated into the EU ETS. Obligations to monitor, report and verify CO₂ emissions from large ships using EU ports have already been enacted, but further measures will follow. It remains to be seen whether car traffic and domestic heating will also become part of the EU ETS in the years to come.

Coronavirus

28 What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

With regard to the covid-19 pandemic, two probable but conflicting scenarios have been anticipated with regard to climate regulation. The first scenario is a general softening of climate regulation and enforcement to disburden the industry and to preserve workplaces. The second scenario is a transition to a more climate-friendly and sustainable economy buffered by generous subsidy programmes. The 'truth' and the political compromise lie somewhere in the middle, but a bit closer to the green transition.

No regulatory 'leniency'

The existing regulations regarding climate change were not amended or softened – neither by the EU nor by the German government. In emissions trading, for example, not only the European Commission but also the national authorities (in Germany, the German Emissions Trading Agency) stressed that the deadlines provided by EU law remained unchanged. The EU presidency further signalled that the EU Green Deal will be pursued and, in March 2020, presented the draft European Climate Law, proposing, inter alia, a legally binding target of net-zero GHG emissions by 2050 (2020/0036(COD)). This will be supported by legislative and administrative measures (involving all sectors of the economy), subsidies and cooperation on the international level. The European Climate Law is currently being discussed in the Council and its preparatory bodies.

Delays and simplifications in procedures

Delays and simplifications were introduced by the administration for procedures and necessary site visits only. For the required emissions reports of installations under the EU ETS desk-reviews and online reviews were allowed instead of site visits by verifiers. Where the verifiers were not able to verify and issue a positive certificate, the competent authorities were enabled to make a conservative estimate of the emissions of the installations. Also, for regular environmental on-site inspections by authorities under the Industrial Emissions Directive or for dangerous 'Seveso' installations (eg, power plants, installations in explosive atmospheres, storage and tank facilities) postponements are currently accepted.



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Funding for the transition to a greener economy

Most future funding of climate protection currently occurs at EU level, not national level. On 21 July 2020, the EU leaders agreed on a recovery plan and the multiannual financial framework for 2021–2027. A minimum of 30 per cent of all expenditure from the recovery fund and the multiannual framework is to be spent on climate protection measures. At least €540 billion of the recovery fund is to be invested in building insulation, public transport, electrification and renewable energies. Forty per cent of the share of the financial framework destined for agriculture is dedicated to measures for better climate protection. Finally, the package contains a 'Just Transition Fund' amounting to €1.5 billion, which is geared towards regions particularly hit by the ecological restructuring of the economy (eg, because of job losses in CO₂-intensive industries such as brown coal mining). The package has been criticised by environmental NGOs, but it is clear that a transition towards a greener economy, including to an ultimately climate neutral economy, is the intention and there are considerable funds for it.

Rebound effect on GHG emissions

Covid-19 has caused a dramatic reduction in industrial activity and mobility. While it was expected that Germany would not comply with the 40 per cent reduction target in overall CO₂ emissions this year (compared to 1990), the pandemic lockdown in the past few months has brought the goal back into reach.

However, another factor must be included in the calculations – the phasing out of energy generated by coal-fired power plants. According to the Federal Environmental Agency, Germany produced 6.3 per cent less GHG emissions from coal-fired power plants in 2019. In parallel, industry emissions decreased by 4 per cent last year. These reductions are commonly attributed to the almost-doubled prices for CO₂ allowances in emissions trading, which render heavily emitting activities less economical.

In June 2020, the German government resolved the last disputed issues in the phase-out of coal-fired power plants, especially regarding compensation for power-plant operators. The pandemic may, however, lead to an economic downturn that could counteract a further decline, and at the end of the crisis rebound effects may occur (such as after the global financial and economic crisis in 2009) if new measures and policies are not put in place to prevent them.

Best practices advisable for clients

Currently, the EU presidency and the German government are vigorously upholding the political demand for a sustainable and greener restart of economic activity. In that context, operators should monitor and request further subsidy programmes that will be foreseen in the EU and national budgets.

The EU has already announced that by the end of 2020 new and more ambitious EU-wide climate goals are to be agreed on.

Malta

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

Malta is a party (both directly and indirectly as a member of the European Union) to the United Nations Framework Convention on Climate Change (UNFCCC), which it ratified in March 1994. It became an Annex I party to the UNFCCC in 2010. Malta ratified the Kyoto Protocol in November 2001 and the Paris Agreement in October 2016.

As a member of the European Union, Malta has implemented all EU climate-related legislation, including that on the promotion of renewable energy, emissions trading, reporting and monitoring of greenhouse gases, ozone layer protection and transport fuels.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

As an EU member state, Malta's climate action is primarily driven by EU climate policy, being also obliged to abide by relevant EU legislative instruments. Its membership in the EU and its Annex I status mean that Malta has had to step up climate action, both in terms of monitoring and reporting, and in terms of quantified emission limitation and reduction commitments towards EU and global mitigation efforts.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

Malta's focus in recent years has been to replace its inefficient conventional electricity production infrastructure and to introduce liquefied natural gas (LNG) as fuel for power generation, which until now was heavy fuel oil. To this end, Malta closed its inefficient Marsa Power Station, completed and placed in operation the 200MW interconnector with the European grid, and commissioned a new 205MW gas-fired, high-efficiency combined cycle gas turbine power plant as well as an LNG facility for the provision of natural gas. In addition, the 149MW power plant, which comprises eight diesel engines, has been converted to run on natural gas instead of heavy fuel oil. These developments will result in significant primary energy savings and in substantial reductions in GHG emissions from the energy sector.

Malta has also focused on adaptation strategies and implemented the National Change Adaptation Strategy, which identifies the principal strategic climate impacts likely to affect Malta and outlines actions to be taken. Some of the actions delineate measures to be taken on the design of buildings that should be improved, if necessary, through enforcement and economic disincentives or incentives; and to maximise passive cooling supported by the education of households

and industry on cost-effective retrofitting of energy and water efficiency-improving technologies onto existing buildings, among other actions. It also encourages commercial and industrial sectors to build reservoirs and other rainwater catchment measures to reuse captured water and to recycle grey water for non-potable purposes, and to introduce efficient water use technologies through the introduction of incentive schemes.

Main national legislation

- 4 | Identify the main national laws and regulations on climate matters.

The Promotion of Energy from Renewable Sources Regulations (Subsidiary Legislation 545.11) is the main piece of legislation governing GHG emissions. These Regulations govern both the reduction in emissions and the promotion of energy from renewable sources, and set out the renewable energy targets that Malta is obligated to achieve by 2020. With respect to reduction of GHG emissions in particular, Malta must reduce these emissions by 10 per cent against 1995 levels. The Regulations also contain provisions for the implementation of national support schemes and cooperation mechanisms among EU member states. Other main climate-related laws and regulations include:

- the Climate Action Act (Chapter 543 of the Laws of Malta), which sets out the guiding principles for the mitigation of GHG emissions;
- the Energy Efficiency and Cogeneration Regulations (Subsidiary Legislation 545.16), which promote the use of energy efficiency measures to ensure achievement of the EU's 2020 target on energy efficiency;
- the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (Subsidiary Legislation 549.77), which provide a framework for the prevention and control of pollution arising from industrial activities;
- the European Union Greenhouse Gas Emissions Trading Scheme for Stationary Installations Regulations (Subsidiary Legislation 423.50);
- the European Union Greenhouse Gas Emissions Trading Scheme for Aviation Regulations (Subsidiary Legislation 423.51); and
- Regulation (EU) 2018/1999 of the European Parliament and of the Council on the Governance of the Energy Union and Climate Action, which sets out the legislative foundation for a governance system of the Energy Union and Climate Action, which aims to ensure the achievement of the EU's 2030 and long-term objectives as well as its international commitments under the Paris Agreement.

National regulatory authorities

- 5 Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

The Malta Resources Authority is the body responsible for certain climate-related matters, namely climate change reporting and the operation of the emission trading system (ETS), both for stationary installations and aviation.

The Energy and Water Agency, a body set up within the Ministry for Energy and Water Management, is tasked with formulating and implementing national policies in the energy and water sectors. With regard to climate action, the agency is responsible for the implementation of legislation and policies related to renewable energy and energy efficiency. The formulation and implementation of national support schemes promoting the use of renewable energy also fall within the Agency's competence.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

As reported in Malta's 2030 National Energy and Climate Plan (drafted in 2018), the main contributors of GHG emissions are the following.

- Energy and transport: the energy industry and the transport sectors are the two main contributors of CO₂ emissions, together making up over 80 per cent of total CO₂ emissions. These sectors also contribute to nitrous oxide emissions with a combined share of approximately 11 per cent of total emissions.
- Waste and agriculture: these two sectors are the main contributors of methane emissions, with the waste sector accounting for approximately 80 per cent of the total share of methane emissions, and agriculture accounting for approximately 18 per cent. The agriculture sector is the largest contributor of nitrous oxide emissions, with a share of over 70 per cent, while the waste sector accounts for just over 12 per cent.

National GHG emission projects

- 7 Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

Major GHG reduction projects in the energy sector include replacing inefficient conventional electricity production infrastructure and introducing liquefied natural gas (LNG) as fuel for power generation. To this end, Malta closed its inefficient Marsa Power Station, completed and placed in operation the 200MW interconnector with the European grid, and commissioned a new 205MW gas-fired, high-efficiency combined cycle gas turbine power plant as well as an LNG facility for the provision of natural gas. In addition, the 149MW power plant, which comprises eight diesel engines, has been converted to run on natural gas instead of heavy fuel oil.

In addition, Malta has implemented various energy-reducing schemes, including financial support for photovoltaic systems of at least 1MWp and the replacement of inefficient appliances for vulnerable persons. The Maltese government has also issued schemes aimed at encouraging ownership of electric vehicles, reducing the number of old motor vehicles on the road and thus reducing emissions.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 Describe the main commercial aspects of the climate sector in your country, including any related government policies.

Photovoltaic (PV) technology is commercially established in Malta. Units are relatively light, and simple structures for government support are sufficient and easily obtainable. They are not unduly disadvantaged by economies of scale from a technical perspective. PV systems produce energy that is green and secure, and fits very well with two of the main objectives of the energy policy. Although still more expensive than conventional fossil-fuel-generated electricity, the gap is closing, especially when externalities are considered.

There has been a significant reduction in the price of PV panels over the years, driven by greater demand and mass production. This is likely to continue, although at a slower pace. This downward price trend has established PV technology as a credible source of renewable energy and has resulted in an increase in the number of applicants benefiting from government support schemes.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

Obligations to reduce GHG emissions mainly arise out of the emissions trading system (ETS) regulations and the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (the IPPC Regulations). The ETS works by putting a limit on overall emissions from certain installations and aircraft, which limit is reduced each year. Within this limit, companies can buy and sell emission allowances as needed. This 'cap-and-trade' approach gives companies flexibility to cut their emissions in the most cost-effective way. The ETS covers certain stationary installations and aircraft operating with a valid licence granted by the civil aviation authorities of Malta, or aircraft that, although not licensed by the civil aviation authorities of Malta, have Malta identified as the being the state with the greatest attributed emissions from flights performed by that aircraft in the base year.

The IPPC Regulations are the main instrument regulating pollutant emissions from 'high-risk' industrial installations, such as energy plants and certain waste management activities. In terms of these regulations, installation operators are required to operate within the emission limit values set out in the permit for the particular activities carried out by the installation. They are also required to operate the installation in accordance with the best available techniques. Installation operators must monitor, record and report annual emissions to the competent authority in accordance with the conditions laid down in the permit.

GHG emission permits or approvals

- 10 Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

Operators of certain installations must obtain a permit, prior to commencement of operations, under both the emissions trading regulations and the IPPC Regulations. The operator must submit an application containing information about the operator and the installation activities, the raw materials to be used that are likely to lead to emissions of GHG gases, the sources of the emissions and any other information that the competent authority may require. To be granted a permit under the former regulations, the competent authority must

be satisfied that the operator is capable of complying with the requirements of the regulations and the conditions of the permit.

The requirements for obtaining a permit under the IPPC Regulations are similar to that under the ETS. The operator must provide the competent authority with information on the operator, the installation and its activities, raw and auxiliary materials to be used, sources of emissions, and the proposed technology and techniques for preventing, or where not possible reducing, emissions. The operator may also be required to place a financial guarantee in favour of the competent authority to secure its obligations under the permit. The competent authority shall take into account the applicant's suitability to undertake the proposed activity, having regard to the operator's qualifications, experience and technical competence, and its financial capacity to comply with its obligations under the permit.

Oversight of GHG emissions

11 | How are GHG emissions monitored, reported and verified?

Under the ETS, installation and aircraft operators must submit a monitoring plan describing the measures by which annual emissions from the installation will be monitored and reported. The monitoring plan must be approved by the competent authority and will serve as the accepted methodology for monitoring in that installation. On an annual basis, the operator of the installation must submit verified emissions reports to the competent authority. The reports must first be verified by a competent, independent accredited verifier before being submitted to the competent authority. A verification report issued by the verifier must accompany the emissions report when this is submitted to the authority.

In terms of the regulations governing industrial emissions, operators must include in the permit application measures for monitoring emissions. The competent authority shall ensure that the permit conditions contain detailed monitoring requirements including the methodology, frequency and evaluation procedure for monitoring emissions. At least once annually, the operator must provide the competent authority with information and results obtained from emission monitoring.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

As a member of the EU, Malta has implemented the emission trading system (ETS), which regulates GHG emissions for certain stationary installations and aircraft. The ETS works by putting a limit on overall emissions from certain installations, which is reduced each year. Within this limit, companies can buy and sell emission allowances as needed.

Registration

13 | Are there any GHG emission allowance registries in your country? How are they administered?

Directive 2003/87/EC, which establishes the scheme for greenhouse gas emission allowance trading within the EU, requires that all allowances be held in the Union registry. The registry system provides for the electronic recording of issuance of allowances and of all transactions involving allowances or units derived from Kyoto Protocol project-based mechanisms performed by operators participating in the EU Emissions Trading System. The registry system records the following elements:

- allowances and units that are issued to and held in installation or aircraft operator accounts;
- annual verified reported emissions for installations or aircraft operators;
- transfers of allowances and units into or out of accounts and surrendering, cancellation and replacement of allowances; and
- annual compliance statements of emissions.

In Malta, the role of national registry administrator is held by the Malta Resources Authority. Accounts of aircraft and operators of installations in Malta are opened and administered by the national registry administrator.

Obtaining, possessing and using GHG emission allowances

14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

Operators of installations and aircraft subject to the compliance requirements of Directive 2003/87/EC must have a holding account opened in the Union registry. The free allowances to which an operator is eligible for a particular year are issued into the operator's account by the registry administrator.

Operators must account for reported emissions by surrendering an amount of allowances equivalent to the quantity of actual emissions reported in the previous year's annual emission report. This function is carried out through the registry account.

An operator holding in their account a quantity of allowances that is less than the actual emissions to be covered by surrendered allowances, must acquire additional allowances or use units derived from Kyoto Protocol project-based mechanisms. An operator with a quantity of allowances greater than the amount of emissions to be covered by surrendered allowances can either hold on to excess allowances or sell them. An operator may also borrow allowances from the subsequent year to cover any shortfall in allowances during a particular year; however, no borrowing of allowances can take place between trading periods.

The administrator shall cancel allowances at any time at the request of an operator of an installation holding those allowances.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

15 | What GHG emission trading systems or schemes are applied in your country?

In Malta, the EU Emissions Trading System is applied and covers both stationary installations and aircraft.

Trading agreements

16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

No standard agreements on GHG emissions trading are used in Malta.

SECTORAL REGULATION

Energy sector

- 17 Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

Malta's average final energy consumption for the period 2016–2018 was approximately 620ktoe. As from 2017, Malta has used, almost exclusively, natural gas for electricity generation, with a small share (431GWh) coming from renewables. According to the national energy efficiency action, Malta's indicative target for 2020 is 822,903toe in primary energy consumption. According to the revised Energy Efficiency Directive, whereby Malta is required to achieve new savings each year from 1 January 2021 to 31 December 2030 equivalent to 0.24 per cent of annual final energy consumption averaged over the most recent three-year period prior to 1 January 2019.

The action plan highlights the following measures and actions to increase energy efficiency and reduce energy demand:

- electricity tariffs designed to promote energy efficiency among consumers;
- large enterprises are to perform high-quality energy audits every four years;
- non-SMEs shall be encouraged to sign voluntary agreements with the Energy and Water Agency to pursue energy efficiency measures;
- smart metering of electricity is to continue, also with the aim to empower consumers to manage their energy consumption intelligently;
- the inclusion of renewable energy in households in the drafting of the 'Minimum Energy Requirements for Building Guidance' and the 'Nearly Zero Energy Building Plan'; and
- the continuation of residential schemes until 2020 (ie, grants for the installation of photovoltaic systems, solar water heaters, roof insulation, double glazing, and water-to-water heat pumps).

In the private sector a number of actions and schemes were designed to facilitate interventions in energy efficiency initiatives and promote the introduction of energy management systems. Non-SMEs registered and doing business in Malta are required under Maltese law to carry out energy audits. The first audits were submitted in December 2015 and must be repeated every four years. Such audits can only be carried out by internal or external energy auditors who are listed on the website of the Regulator for Energy and Water Services or by energy auditors eligible in other member states. SMEs are also encouraged to carry out energy audits and report their verified energy savings. The Energy and Water Agency has set up a voluntary scheme for the period 2014–2020 whereby such SMEs can benefit from grants to help them carry out energy audits.

Other sectors

- 18 Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

There is no specific sectoral regulation on GHG emissions. However, the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations cover various activities, including certain waste management activity, exploration and exploitation of natural resources, and certain industrial processes. Emissions from aircraft are covered under the ETS.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

Total final energy consumption of renewable energy systems (RES) in Malta in 2017 amounted to 431GWh, which equates to 7 per cent of gross final energy consumption. The government's policy is to fully exploit all reasonable potential indigenous sources of RES to achieve Malta's 2020 RES target of a 10 per cent share in gross final consumption of energy. Photovoltaic (PV) technology was demonstrated to be the most robust and fastest-growing of all technologies, owing much to the characteristics of Malta in relation to solar intensity but also to the successful history of public and government initiatives to promote the technology to its maximum reasonable potential. There was a sharp increase in the uptake of PV technology between 2010 and 2017, with the total cumulative installed capacity at the end of 2017 standing at just over 112MWp. Successful PV deployment has happened largely due to national incentives offered through various schemes, including European Regional Development Fund co-financed grants and attractive feed-in-tariffs.

Currently, the largest contribution of renewable energy is provided by solar PV panels, contributing around 36 per cent of renewable energy in 2017, followed by heat pumps with 22 per cent, the use of biofuels in the transport sector at 21 per cent and solar water heaters contributing 13.6 per cent.

Malta, as a member of the EU, had to achieve certain targets by 2020, namely 10 per cent final energy consumption from renewable sources and a 10 per cent cut in GHG emissions from 1990 levels. According to Malta's national energy plan (published in December 2019) it is projected that Malta will reach a RES share of 9.3 per cent by the end of 2020, and will therefore be seeking to make use of statistical transfers to cover the shortfall. This gap is mainly due to a higher-than- envisaged increase in electricity and energy demand in the very short term that reflects the overall increase in population, tourist activity and economic growth.

Specific to the transport sector, Malta had a sub-target of a 10 per cent reduction in GHG emissions by 2020 from 1990 levels. This target was met largely through the promotion of biodiesel and bioethanol.

Malta's contribution to the EU's 2030 renewable energy target will require the extension of current policies and measures, and the development of new initiatives tailored to local developments. Its objective for this period is to achieve an 11.5 per cent share of renewable energy in gross final energy consumption in 2030 and a 14 per cent RES share in the transport sector. Bioenergy is projected to grow between 2021 and 2030, largely owing to an increasing percentage of biofuels in road transport fuels.

Wind energy

- 20 Describe, in general terms, any regulation of wind energy.

Malta has no specific regulation on wind energy. Although it has studied the possibility of wind energy, there are no wind farms as yet in Malta.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

The introduction of the feed-in tariff for solar photovoltaic systems in 2010 led to a sharp increase in uptake of PV technology in the past decade. The Electricity Generated from Solar Photovoltaic Installations Regulations (Subsidiary Legislation 545.27), enacted in September 2010, sets feed-in tariffs for the electricity generated by PV installations connected to the grid, including those systems benefiting from a capital grant. New feed-in tariffs were published during 2013 and are revised regularly to ensure a reasonable return on investment and avoid over-compensation as market prices of new systems change.

The installation of a PV system may require both a development planning permit from the Planning Authority and a generating licence from the Regulator for Energy and Water Services. In November 2015, the Planning Authority issued a new set of guidelines where one of its objectives was to further support the uptake of solar technologies within the curtilage of buildings. These new guidelines encourage the introduction of PV technology at ground level within backyards, within the building fabric, in surface car parks and other open spaces, particularly those within non-residential development. Subject to compliance with the guidelines, no specific planning permits are required. However, PV installations that fall outside the scope of these guidelines require a planning permit.

A system of fast-track permitting was also adopted by the Regulator for Energy and Water Services (REWS) for PV panels not larger than 16 amps per phase to facilitate the installation of these systems and their connection to the grid. Larger PV systems (greater than 16 amps per phase) still require authorisation by the REWS prior to construction and, once commissioned, a licence to operate is required prior to connection to the grid. These systems may also require a grid connection study to be carried out by Enemalta plc (Malta's distribution system operator) to ensure seamless integration with the network.

While PV technology contributes the largest share of renewables in Malta's final energy consumption, solar water heaters (SWH) also make a notable contribution with a share of 13.6 per cent. SWHs are favoured by the high solar intensity prevalent in Malta and they eliminate a good percentage of energy consumption otherwise going towards water heating in the residential and, to a lesser extent, the commercial sector. Since 2005, a number of grant schemes have been provided to promote the use of solar water heaters for households, increasing RES-H generation by an average of 3.8GWh per year. Nevertheless, there has been a downward trend in recent years in the uptake of SWH installations. This could be attributed to the consumer shift towards PV systems, as well as to developments in the construction and renovation of buildings, linked with limited roof accessibility.

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

Malta does not specifically regulate hydropower, geothermal, wave and tidal energy.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

Regulation on production of energy based on waste does not currently exist. At present, there are no waste-to-energy plants in Malta; however, the government has included in its waste management policy a waste-to-energy plant and has recently issued tenders in connection with this project.

Biofuels and biomass

24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

Biomass for generation of heat and power is not regulated under Maltese law. Malta does not have the land area required to cultivate biomass energy crops to any practical extent. Besides this, fertility of the soil is low and water is scarce. Together with Cyprus, Malta has the highest water stress index in Europe, and among the highest in the world. Furthermore, Malta's heating demand is limited and current policy is to promote high-efficiency electricity-based heating utilising heat pump technology where applicable, which achieves the highest overall fuel efficiency while taking advantage of the decarbonisation of the generation sector. Nevertheless, biomass comprising primarily of wood charcoal, fuel wood and wood pellets is imported into Malta and used for heating purposes by approximately 12,000 households that have a wood or pellet burning stove or fireplace, as well as a small number of establishments in the services sector and industry.

As stated above, crops grown for the purpose of producing biofuel require large expanses of land, fertile soil and an abundant supply of water. Malta has none of these, making it difficult to cultivate biofuel crops domestically. At present, biodiesel is the only biofuel available on the market in Malta. It was introduced in Malta in 2003. Biodiesel consumption saw a steady increase until 2007, which can be mainly attributed to a higher availability from fuel stations and its lower price at the pump. However, consumption declined between 2007 and 2010 despite the increase in the prices of petroleum products. In a report published by the Malta Resources Authority, the factors that could have led to this decline in consumption include the difficulty in accessing pre-blended biofuel and concerns on the quality of biofuel, among others. It must be noted that during this period, fuel stations were only allowed to store and sell B100 biodiesel, with the fuel effectively being blended during refuelling. Eventually two of the three local producers of biodiesel closed down. To reverse this trend, regulation was introduced in 2011 to boost the use of biofuels. This introduced a substitution obligation for importers and wholesalers of automotive fuels whereby market players were now obligated to place on the market a minimum amount of biofuel content calculated as a percentage of the total EN228 petrol and EN590 diesel imported or wholesaled. The percentage was set at 1.5 per cent for 2011, and expected to reach 10 per cent by 2020. The percentage was set at 1.5 per cent for 2011 and reached the expected 10 per cent by 2020.

The biofuels currently used in Malta are biodiesel FAME (fatty acid methyl ester) and HVO (hydrotreated vegetable oil). Biodiesel FAME has to meet the quality standard requirements of EN 14214 and HVO has to meet the quality standard requirements of MS EN 15940. In 2017, UCO (used cooking oil) showing low emission factors was already used as feedstock for biodiesel and partly for HVO. The other feedstock for HVO was palm oil (process not specified). Bioenergy is projected to grow between 2021 and 2030, largely owing to an increasing percentage of biofuels in road transport fuels. Production of bioenergy from waste treatment facilities, both electricity and heat, and the use of biomass for space heating in the residential sector are expected to remain largely stable in the projected period. Biofuels are expected to continue increasing throughout the projected period mainly due to the continued blending of road diesel with HVO, FAME (to a lesser extent) and advanced biofuels, in line with the Renewables Directive. Advanced biofuels are expected to contribute to 25 per cent of the total consumption of biofuels by 2030.

Carbon capture and storage

- 25 | Describe, in general terms, any policy on and regulation of carbon capture and storage.

Malta has no regulation or policy on carbon capture and storage.

CLIMATE MATTERS IN TRANSACTIONS**Climate matters in M&A transactions**

- 26 | What are the main climate matters and regulations to consider in M&A transactions and other transactions?

No specific climate matters are considered in M&A transactions.

UPDATE AND TRENDS**Emerging trends**

- 27 | Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

There are no updates at this time.

Coronavirus

- 28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

There is no covid-19 legislation specific to these topics.

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

The main international agreements on climate matters that are applicable in Mexico are the United Nations Framework Convention on Climate Change, its Paris Agreement and the Kyoto Protocol. Mexico is a contracting party to these agreements and their domestic implementation is mainly through the General Climate Change Law (LGCC), its Regulations on matters of the National Registry of Emissions (RLGCC), the Energy Transition Law and the Power Industry Law (including their Regulations), and public policy formulated to regulate climate matters in Mexico.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

Regulatory policies in Mexico are directly affected by international and foreign regulations and experience, in the way that the Mexican government has a mandate to observe the trading systems of other countries that would represent the lower cost for the implementation of a national trading system, international and regional experiences in matters of carbon credit or allowance trading, or trading of any other market instruments for GHG emissions reduction, such as CORSIA, the carbon market between California and Quebec, the Clean Development Mechanism of the United Nations Framework Convention on Climate Change or the Emission Trading System of the European Union, and to take them into consideration for founding the basis of the Mexican emissions trading system, as established in the second transitory article of the amendment to the LGCC enacted on 13 July 2018.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

Mexico has adopted three main government policies on climate matters: an adaptation policy; a GHG emissions reduction policy; and a clean-energy consumption policy. These policies are being implemented and are intended to be complied with mainly through the following policy instruments:

- National Atlas of Climate Change Vulnerability (published in August 2018);
- National Inventory of GHG Emissions (containing information from 1990);

- a market for verified emission reductions (the non-binding trial programme started during the first quarter of 2020 and will be mandatory by 2022); and
- a market for clean energy certificates (CELs) through mandatory acquisition of such instruments by (power) suppliers and other power industry participants. However, at the time of writing, Mexico's independent system operator, the National Centre for Energy Control (CENACE), has not implemented an annual 'spot' market for such clean energy certificates (although it is mandated by applicable regulations). As a result, the market clean energy certificates are based – exclusively – on bilateral transactions.

The federal government has also recently introduced actions that could impact the renewable energy industry and, hence, the efforts to combat climate change. Those actions include: (1) the CENACE Order; (2) the Ministry of Energy (SENER) Reliability Policy; and (3) the Energy Regulatory Commission (CRE) (Transmission) Resolution.

Main national legislation

- 4 | Identify the main national laws and regulations on climate matters.

The LGCC and the RLGCC are the main laws and regulations on climate change matters; however, there are other rules, norms and laws that indirectly regulate climate change issues including abatement, mitigation and adaptation measures.

On 29 July 2020, the state government of Tamaulipas published a new law establishing an environmental tax for the emission of greenhouse gases from stationary sources located in the state. This new tax is a response from the state government against the federal government's recent policies, which hinder the development of renewable energies. It is unclear whether this new tax will remain in effect for long.

National regulatory authorities

- 5 | Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

The Ministry of Environment and Natural Resources (SEMARNAT) is the national authority responsible and empowered to dictate and implement public policy on climate matters in Mexico. The states and municipalities have only certain and limited faculties regarding climate change mitigation and adaptation matters.

SEMARNAT is assisted by the National Institute of Ecology and Climate Change and the Inter-Ministerial Commission on Climate Change, both with competence to coordinate and develop national policy on climate change matters, and evaluate compliance with the

adaptation and mitigation objectives set forth in the General Law of Climate Change, among other faculties. These two entities are part of the National System of Climate Change, which serves as a permanent mechanism of concurrence, communication, coordination and collaboration on the national policy of climate change.

SENER has the authority to: (1) determine the yearly requirements for the acquisition of CELs; and (2) establish the criteria for granting CELs in favour of (clean power) generators. Likewise, SENER has the power to issue public policy on efficiency, quality, reliability, continuity, safety and sustainability of the National Electric System (SEN), provided that SENER is also responsible for the planning of the SEN. The CRE is the regulator for the power sector, while CENACE is the operator of the SEN and the wholesale electricity market across Mexico.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 | What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

According to the Mexican National Inventory of GHG Emissions of 2015, published on 18 May 2018 by the National Institute of Ecology and Climate Change, the main sources of GHG emissions in Mexico and their annual emission volumes of GHGs are the following:

- fossil fuel consumption, mainly by the energy, manufacturing, construction and transportation industries: 436,459.963Gg;
- livestock production systems: 70,567.60Gg;
- industrial processes: 54,111.761Gg;
- solid waste treatment: 45,909.010Gg;
- fugitive emissions from oil, gas and mineral extraction: 44,418.868Gg; and
- agricultural activities: 46,286.569Gg.

There are no limitation or reduction obligations currently applicable to private parties in Mexico.

National GHG emission projects

- 7 | Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

Several Clean Development Mechanism projects have been implemented in Mexico throughout the past decade, from waste to energy projects, to renewable energy projects and protection of forests as carbon sinks.

However, with the Kyoto Protocol winding down, REDD+ projects have come to the fore, with proceeds from the payment of rights for change in the use of forestry land and other federal subsidies being directed towards the payment to local communities and *ejidos* for the environmental services that their forests provide. This is essentially a payment to preserve the forestry ecosystem.

In addition, on 24 December 2015, Mexico enacted the Law for the Energy Transition, which sets forth the objective that by 2024 at least 35 per cent of the energy that is consumed should be produced by renewables and other clean sources. One of the instruments to achieve this goal is the CELs that will be issued to renewable power plants and other technologies classified as clean energy.

The most relevant project is the Mexican Emissions Trading Scheme, which is currently in a trial period with no economic effects for the participants, but that will become binding by 2022 when the government is expected to establish GHG emissions caps per industry.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 | Describe the main commercial aspects of the climate sector in your country, including any related government policies.

In Mexico, there is still no mandatory emissions reduction policy, which clearly hinders the development of a fully developed emissions trading scheme and market.

However, considering the objective set forth in the Law for the Energy Transition to achieve a 35 per cent domestic consumption energy produced from renewable and clean sources, the groundwork for a clean energy certificates market has been laid, with obligated energy consumers already showing an appetite to obtain and market such certificates. These certificates will be traded with large power consumers, who will have to gradually increase the amount of electricity obtained from clean sources.

In addition, on 13 July 2018, the General Climate Change Law was modified to set forth for the first time the obligatory emission reductions that different sectors of the economy will have to comply with in the near future. To this end, the trial period of the Mexican Emissions Trading scheme began in the first quarter of 2020 and while it currently has no economic consequences for the participants (companies generating 100,000 tonnes or more of CO₂ per year), it is expected that it will start running officially by 2022. By the end of the trial period, the Ministry of Environment and Natural Resources (SEMARNAT) will have to establish a GHG emissions cap per industry and will also issue allowances that will be directly assigned to companies. It is also expected that SEMARNAT will organise auctions for allowances.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

Mexico's GHG emissions reduction commitments are those taken before the international community under the Paris Agreement, as part of the Nationally Determined Contributions, which have been internally adopted through the General Climate Change Law and consist of an unconditional 22 per cent reduction of the current GHG emissions levels to be achieved by 2030, through the participation of the ensuing economic sectors and their specific emission reduction goals:

- transportation: 18 per cent;
- electric energy generation: 31 per cent;
- residential and commercial activities: 18 per cent;
- oil and gas: 14 per cent;
- industry: 5 per cent;
- agriculture and livestock: 8 per cent; and
- waste: 28 per cent.

There are still no mandatory emissions reduction, limitation or removal obligations set for private parties in Mexico; however, it is expected that there will be by 2022.

On the other hand, the Regulations on matters of the National Registry of Emissions (RLGCC) establishes other kinds of obligations regarding GHG emissions that do apply to private parties in the country, which are to:

- identify direct and indirect GHG emissions from stationary and mobile sources;
- measure, calculate or estimate the GHG generated by all the emission sources identified;
- report the GHG emissions annually;
- verify the reported information; and
- keep all the information, data and documentation about such GHG emissions for a period of five years.

Those obligations are applicable to specific activities of specific industries listed in the RLGCC, all of which belong to the following sectors:

- energy;
- industry;
- transportation;
- agro-livestock;
- waste; and
- commerce and services.

However, the obligation to report to the Ministry of Environment and Natural Resources (SEMARNAT) the annual generation of GHG emissions is only mandatory if the regulated party generates 25,000 tonnes or more of direct and indirect CO₂ equivalent emissions in the corresponding year.

GHG emission permits or approvals

- 10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

So far, there are no permits or approvals required for the emission of GHG in Mexico.

Oversight of GHG emissions

- 11 | How are GHG emissions monitored, reported and verified?

Pursuant to the RLGCC, GHG emissions are required to be measured, calculated or estimated by emission factors, material/input balance, alternative methodologies proposed to and approved by SEMARNAT or any mandatory methodologies that do not yet exist but may be established by the government in the future.

The reporting obligation must be complied through the Annual Emissions Inventory (known as the COA). In addition, a verification report is required to be submitted to SEMARNAT every three years. Such verification reports must be issued by companies certified by the Mexican Accreditation Entity and approved by SEMARNAT, with the purpose of reviewing the GHG emissions generated prior to the presentation of the COA, and verifying the adequate and correct calculation of such emissions. There are no mandatory verification criteria yet, but they are expected to be stipulated in a Mexican official standard in the future.

There are currently nine certified verification organisations and approximately 20 auditors operating in Mexico.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

- 12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

There are no emission allowance regimes in Mexico yet. However, the trial period of the Mexican Emissions Trading scheme began in the first quarter of 2020 and while it currently has no economic consequences for the participants (companies generating 100,000 tonnes or more of CO₂ per year), it is expected that it will start running officially by 2022.

By the end of the trial period, the Ministry of Environment and Natural Resources (SEMARNAT) will have to establish a GHG emissions cap per industry and will also issue allowances that will be directly assigned to companies. It is also expected that SEMARNAT will organise auctions for allowances.

In addition, the Regulations to the General Climate Change Law on the National Emissions Registry provide the possibility to register any project contributing to the mitigation, reduction or absorption of GHGs, which will be linked to the future GHG emissions allowances market.

Registration

- 13 | Are there any GHG emission allowance registries in your country? How are they administered?

There are no GHG emission allowance registries in Mexico yet. There is, however, a National Emissions Registry where all parties directly or indirectly generating 25,000 tonnes of equivalent CO₂ or more must report the volume generated every year. In addition, projects contributing to the mitigation, reduction or absorption of GHGs may also be registered in this registry. A certified third party must verify the aforementioned report to remove the possibility of double accounting or under-reporting.

Obtaining, possessing and using GHG emission allowances

- 14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

As mandated by the General Law of Climate Change, the trial period of the Mexican Emissions Trading scheme began in the first quarter of 2020 and while it currently has no economic consequences for the participants (companies generating 100,000 tonnes or more of CO₂ per year), it is expected that it will start running officially by 2022. By the end of the trial period, SEMARNAT will have to establish a GHG emissions cap per industry and will also issue allowances that will be directly assigned to companies. It is also expected that SEMARNAT will organise auctions for allowances.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

- 15 | What GHG emission trading systems or schemes are applied in your country?

There is currently no other mandatory emissions trading scheme in Mexico.

Based on the foregoing, the General Climate Change Law provided the preliminary rules for a 36-month pilot trading programme, without economic consequences for the participants. However, it is still uncertain when the pilot programme will officially be rolled out or when it will turn into a mandatory scheme for the relevant sectors.

Trading agreements

- 16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

There are no standard agreements on GHG emissions trading in Mexico.

SECTORAL REGULATION

Energy sector

- 17 Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

According to the 2019–2033 National Electric System Development Programme published by the Ministry of Energy (SENER), in 2018 gross energy production from the Federal Electricity Commission (CFE) and the net energy output from private generators was 317,278GWh. In this regard, fossil fuel power plants (mainly natural gas-fired combined-cycle power plants, which generated 51 per cent of the total production in Mexico) accounted for approximately 76.8 per cent of the total energy output nationwide. On the other hand, the total gross energy consumption for 2018 was around 318,236GWh (2.7 per cent more than in 2017). Likewise, according to the 2015 National GHG Emissions Report published by the National Institute of Ecology and Climate Change, in 2015, GHG emissions from the energy industry were approximately 165MtCO₂e.

From an energy efficiency standpoint, the main policy instrument is the Transition Strategy for the Use of Cleaner Technologies and Fuels (the Energy Transition Strategy), published by the federal government in February 2020.

The energy efficiency trend in Mexico has focused on the following:

- energy efficiency as a financial sustainability asset for Mexican households (ie, less and more efficient energy consumption, which means lower expenses);
- LEED or Energy Star-types of systems to keep score and certify corporate or government buildings;
- implementation of Mexican Official Standards (NOMs) with respect to high energy consumption devices;
- energy efficiency goals for buildings of the federal government; and
- distributed generation opportunities for clean energy sources.

For example, the government published the General Provisions for Energy Efficiency in Buildings, Fleet Vehicles and Industrial Facilities of the Federal Public Administration for the 2020–2024 term. Such regulations provide for (among other matters) energy efficiency goals in the context of reducing electricity consumption for office buildings, as well as increasing fuel efficiency of the fleet vehicles of the federal government.

Moreover, there are multiple Mexican Official Standards for fostering energy efficiency in Mexico, including energy efficiency-related standards for devices such as washing machines and refrigerators.

Finally, although several (clean energy-related) distributed generation regulations were put in place by the former (federal) administration – including standard forms of contract between basic suppliers and 'exempt generators' (owners of generation facilities with an installed capacity below 0.5MW) for the sale of excess energy or for the sale of the total energy output from distributed generation facilities, terms and conditions to calculate prices payable to exempt generators (eg, net metering or net billing) and interconnection rules for distributed generation assets – the actions taken by the current federal government within the past few months (especially the National Center of Energy Control (CENACE) Order and the SENER Reliability Policy) have created profound uncertainty for (clean) distributed generation projects that could have benefited multiple end users, including those under vulnerable conditions. In addition, even though new regulations with respect to 'collective' distributed generation (ie, distributed generation facilities that deliver energy to two or more load points in the general distribution grids) were

approved by the Energy Regulatory Commission, they have not become effective as the CFE and SENER have shown significant political push-back against distributed generation.

Other sectors

- 18 Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

There are no emissions regulations for specific sectors, but draft rules are currently under evaluation to prevent and control emissions of methane in the oil and gas industry.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

According to the 2019–2033 National Electric System Development Programme (PRODESEN 2019–2033), in 2018 renewable energy production in Mexico accounted for approximately 16.7 per cent of the total generation output countrywide (equal to 53,019GWh). Hydropower is still the main renewable energy resource (based on the fact that the Mexican government classified, for the purposes of PRODESEN 2019–2033, big hydropower plants as clean/renewable energy assets despite their environmental impacts). That said, solar has had the most significant increase (by 523.2 per cent from 2017 to 2018) among clean energy technologies in Mexico.

The Power Industry Law (LIE), passed by the Mexican Congress in 2014, provides the fundamental legal framework for the power sector in Mexico. Furthermore, the LIE sets forth the key principles of clean energy-related obligations. Additionally, the Energy Transition Law, enacted in 2015, establishes that the share of clean energy assets in the production of energy shall be at least 35 per cent by 2024.

The LIE also defines 'clean energy' as those energy sources and electricity generation processes that allow emissions or waste, when applicable, not to exceed the thresholds set forth by the relevant regulations. As such, clean energy includes wind, solar, wave, tidal, geothermal, hydro (essentially, mini-hydro – that is, hydropower plants with an installed capacity that does not exceed 30MW), nuclear and waste-to-energy sources.

More importantly, the LIE and its regulations set forth an obligation for power suppliers, qualified users participating in the Mexican Wholesale Electricity Market (MEM), final users who receive energy under an isolated supply scheme and holders of grandfathered interconnection agreements whose load points do not consume their total energy from clean energy resources, so that such entities and users acquire a certain amount of clean energy certificates (CELs) on a yearly basis. The number of CELs that shall be acquired by these load serving entities, users and holders of grandfathered interconnection agreements is based on a percentage of the energy consumption of the load points associated with such persons and companies. The percentages determined by the Ministry of Energy (SENER) for purposes of complying with this obligation to acquire CELs are:

- 2020: 7.4 per cent;
- 2021: 10.9 per cent; and
- 2022: 13.9 per cent.

The regulatory body responsible for the administration of these clean energy-related obligations is the Energy Regulatory Commission (CRE). CELs are awarded by the CRE to clean energy generators on a monthly basis pursuant to the energy generation information collected, mainly, from the National Centre for Energy Control (CENACE), the Mexican ISO. Overall, the CRE grants a CEL for each MWh injected into the Mexican grid. Furthermore, CELs are traded either at the yearly CELs market operated by CENACE (such CEL spot market is pending implementation by CENACE) or through bilateral contracts (including those contracts awarded as a result of the long-term auctions organised by CENACE). In the context of bilateral contracts, CELs are transferred by means of the execution of bilateral transactions. The CRE has implemented an Electronic System for the Management of CELs and Compliance of Clean Energy Obligations for the purposes of handling the granting, processing and transfer of CELs among clean generators, power suppliers, qualified users that participate in the wholesale electricity market, final users under an isolated supply scheme, holders of grandfathered interconnection agreements that have the obligation to acquire CELs and other entities or individuals who voluntarily want to purchase or sell CELs.

Except for the form of power hedging agreements in terms of the long-term auctions called by CENACE in 2015, 2016 and 2017 (whose target is the deployment of renewable energy projects as the energy sold thereby shall be produced exclusively from clean energy facilities), the current Mexican legal framework does not provide for other standard forms of contract in relation to the trading of CELs in the MEM.

The Amendment to the CEL Rules, the CENACE Order, the SENER Reliability Policy and the CRE (Transmission) Resolution have had a substantial impact on the legal certainty necessary for investment in the renewable energy sector. This will, inevitably, affect the country's development in this area by creating a combative environment around energy transition and climate change.

Nevertheless, and in spite of any political ideologies, renewable energy is still expected to have a key role in the Mexican power sector in the medium and long term. Wind and solar energy assets are currently expected to cover around 48 per cent of the capacity to be installed within the next 15 years (approximately 33,929MW); however, this figure may change depending on how the current government's public policies end up being implemented.

Wind energy

20 | Describe, in general terms, any regulation of wind energy.

Wind energy does not have specific regulations. The LIE and the regulations arising from the law set forth the rules, terms and conditions applicable to energy activities, including clean and renewable energy-related activities, such as wind energy generation. With regard to permits, energy generation facilities (such as wind farms) with an installed capacity equal to or greater than 0.5MW require a generation permit from the CRE (the term of the generation permit is 30 years).

Notwithstanding the latter, certain rules and manuals provide for specific rules with respect to wind energy, for example:

- the Interconnection Manual establishes certain technical information requirements for purposes of the studies that CENACE must perform in order to determine the feasibility of the interconnection of the corresponding wind energy generation facility to the Mexican National Transmission Grid;
- the Grid Code sets forth the general terms and conditions in connection with the physical operation by CENACE of the Mexican electricity system (including dispatch instructions to all generation assets) and, thus, incorporates certain parameters in relation to primary frequency control and other actions, ancillary services or reserves that CENACE needs to adequately control wind farms interconnected to the Mexican grid; and

- the Short-Term Energy Market Manual contains special requirements for the submission of energy sale offers in the Day-Ahead and Real-Time Markets for wind energy assets (as intermittent dispatchable resources – as opposed to fossil fuel power plants).

Moreover, from a tax standpoint, investments in the purchase of machinery and equipment for energy production from renewable resources (eg, wind turbines) are subject to a 100 per cent income tax deduction. Furthermore, the Income Tax Law also provides for certain tax benefits in relation to the payment of dividends by renewable generators (such as wind energy generators) through the CUFIN Verde instrument. Additionally, equipment and facilities to be installed for the purposes of wind energy generation assets may be subject to certain benefits in regard to import duties as per the applicable Mexican laws (eg, the Import and Export Taxes Law) and free trade agreements signed by the Mexican government. Owing to an ongoing anti-dumping investigation, the import into Mexico of wind towers from China is subject to a provisional anti-dumping duty of 143 per cent (or 41.22 per cent in some cases). However, if the wind towers are imported as turbines (the complete equipment – ie, tower, nacelle, rotor and blades), no anti-dumping duties should apply.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

Solar energy does not have specific regulations. Solar generation assets with an installed capacity equal to or greater than 0.5MW require a generation permit from the CRE (the term of the generation permit is 30 years).

Nevertheless, there are specific rules applicable to solar energy in Mexican regulations, mainly:

- the Interconnection Manual in the context of the technical information that is necessary for CENACE to perform the relevant interconnection studies for solar power plants;
- the Grid Code, which establishes certain technical requirements for solar power plants in relation to the physical operation by CENACE of the Mexican electric system (including primary frequency response and other actions, ancillary services or reserves required by CENACE to control and dispatch solar photovoltaic (PV) systems interconnected to the grid); and
- as an intermittent dispatchable resource, solar energy projects are subject to requirements for submittal of energy sale offers in the short-term energy market that differ from conventional power plants' offers.

Distributed generation, including solar PV distributed generation, has a different set of rules to utility-scale projects, particularly, the 'Interconnection Manual for facilities with an installed capacity below 0.5 MW' and the 'General administrative provisions, forms of contract, price calculation methodologies and general technical specifications, applicable to distributed and clean distributed generation power plants'.

The long-term auctions called by CENACE in 2015, 2016 and 2017 were a key policy instrument – from an energy market structure standpoint – to develop utility-scale solar energy projects across Mexico. Fixed prices and long-term contracts awarded through this mechanism ensure financing (through equity, debt or both) for solar energy generators. The last long-term auction held by CENACE in 2017 resulted in a record-setting price for solar energy of US\$17.7 per MWh. Having said that, the current federal government first suspended then cancelled the 2018 and 2019 long-term auctions and is not expected to call for new long-term auctions.

Although solar PV projects based on (1) bilateral power hedging agreements between generators and qualified suppliers and (2) spot

market prices have been developed, financed, built and commissioned, recent government action in the form of the CENACE Order and, more importantly, the SENER Reliability Policy, have put at risk the deployment of new solar PV assets in Mexico. Furthermore, while the short-term energy market currently follows a merit order (economic) dispatch methodology that facilitates the financial dispatch of (merchant) solar energy assets (solar energy projects' production and variable costs are minimal), it is likely that the government will pursue regulatory changes in order to change the economic dispatch principle for the benefit of conventional power plants (such as those owned by the Federal Electricity Commission).

Finally, from a tax standpoint, investments in the purchase of machinery and equipment for energy production from renewable resources (eg, solar panels, trackers and inverters) are subject to a 100 per cent income tax deduction. Likewise, the CUFIN Verde instrument (pertaining to wind energy) also applies to solar energy projects in the context of dividend payments in relation to the applicable tax income in Mexico. The Electricity Sectorial Programme issued by the Ministry of Economy grants certain benefits to solar power companies (ie, those companies directly involved in the production of energy) for purposes of exemptions or reductions of import duties (eg, with respect to the import of solar panels and other equipment associated with solar energy projects such as inverters). On the other hand, import of solar panels for commercial purposes could be subject to a 15 per cent import duty. Solar panels are also subject to certain benefits in regard to import duties under free trade agreements signed by the Mexican government.

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

Geothermal energy is regulated by means of the Geothermal Energy Law, which sets forth the basic terms and conditions for the recognition, exploration and exploitation activities of geothermal resources to produce energy or for other purposes (eg, cooling and heating). The three main governmental approvals that are established in the Geothermal Energy Law are:

- recognition registration granted by SENER so that preliminary works to identify potential geothermal resources are carried out (the term of these recognition registrations is eight months);
- exploration permits granted by SENER to analyse the geological, geophysical and geochemical elements of the geothermal area that is being explored, as well as other works to ascertain the existence of the geothermal resource (the term of these exploration permits is three years, which can be extended for three additional years); and
- exploitation concessions granted by SENER in order to authorise the performance of any works associated with the construction, extraction, commissioning, production and transformation of the relevant geothermal resource (these concessions are subject to a 30-year term, which may be extended).

Regardless of the specific provisions contained in the Geothermal Energy Law, geothermal assets that produce energy are also subject to the provisions of the LIE and, thus, require a generation permit from the CRE if the installed capacity is equal to or greater than 0.5MW.

Hydropower, wave and tidal energy generation assets with an installed capacity equal to or over 0.5MW also require a generation permit from the CRE, provided further that, water concessions and authorizations from the National Water Commission are required for using national waters to produce energy.

In addition to the foregoing, it is important to note that Mexican energy regulations establish some specific rules, terms and conditions

for geothermal plants (as a firm non-dispatchable resource), as well as for hydropower, wave and tidal energy assets in the context of interconnection-related information and operation and dispatch by CENACE. For example, with respect to (big) hydropower facilities, CENACE must assess the requirements for energy and ancillary services of the Mexican electric system seven days in advance for purposes of the issuance of (financial) dispatch instructions for the corresponding operation day.

The general tax incentives described for other renewable energy technologies (ie, CUFIN Verde and customs benefits for the power industry) may also be applicable to geothermal, hydropower, wave and tidal energy generation projects.

Finally, it is worth mentioning that geothermal and hydropower projects are subject to certain real estate-related obligations under the LIE (as a result of requiring a specific location) for purposes of acquiring land rights in order to construct and operate those types of generation facilities, including the delivery of notices, need for appraisals, use of standard forms of real estate contract and court validations.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

Waste-to-energy projects are deemed clean energy resources under applicable Mexican laws and regulations. All energy generation facilities (such as waste-to-energy power plants) with an installed capacity equal to or greater than 0.5MW require a generation permit from the CRE (valid for 30 years). Likewise, urban solid waste management is regulated under municipal and state laws and may be subject to local concessions and authorisations.

In addition to certain rules that apply to waste-to-energy projects in relation to interconnection studies (waste-to-energy power plants are considered conventional power plants for such purposes), it is important to highlight that waste-to-energy power plants are subject to different dispatch rules (similar to base-load power plants) as opposed to intermittent renewable energy facilities such as solar and wind. Furthermore, the technical configuration of waste-to-energy facilities implies that they must submit sale energy offers in the short-term energy market with different requirements than wind or solar energy facilities, provided that the premise of merit (economic) dispatch orders (ie, based on production and variable costs) is still the same.

The general tax and customs incentives described for other renewable energy technologies may also be applicable to waste-to-energy projects.

Biofuels and biomass

24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

In general terms, electricity generation from biomass is subject to:

- a generation permit;
- specific rules regarding interconnection studies and dispatch instructions; and
- tax and customs incentives.

On the other hand, it is important to highlight that production, storage, transportation and commercialisation of biofuels is regulated pursuant to the Law for Promotion and Development of Biofuels. In accordance with this law, the above-mentioned biofuel-related activities require a permit granted by SENER or the Ministry of Agriculture and Rural Development, as applicable.

Carbon capture and storage

25 Describe, in general terms, any policy on and regulation of carbon capture and storage.

There is currently no specific regulation or policy governing carbon capture and storage in Mexico.

However, on 6 November 2018, the federal government enacted the Guidelines to prevent and control methane gas emissions in the hydrocarbons sector. The Guidelines provide the obligation to assess, identify, measure and abate methane emissions. The techniques allowed in the Guidelines to abate methane emissions are varied, encompassing sequestering, redirecting to other processes, combusting and flaring. All companies and facilities involved in the hydrocarbons sector where methane gas may be present (ie, oil and gas exploration, production, storage, transport, distribution and processing) are obliged to comply with the Guidelines. All existing and new projects (all projects that have obtained a permit or an agreement with the National Hydrocarbons Commission) must conduct a diagnosis of their facilities and establish a methane emissions reduction goal, while new projects should not exceed the volume of methane estimated in the design of the project. Compliance with the obligations provided in the Guidelines, and reporting thereto, was expected by November 2019; however, this term was extended for an additional 19 months upon the lack of Authorised Third Parties required to sign off on the reports and diagnosis of the facilities.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

26 What are the main climate matters and regulations to consider in M&A transactions and other transactions?

Climate matters are not considered in the course of ordinary M&A transactions in Mexico. On financing operations, we are starting to see some credit institutions, particularly export-import banks and multilateral banking institutions, include some covenants or specific provisions regarding the emission of GHGs from specific projects; however, we cannot say that this is a general trend in Mexican transactions.

UPDATE AND TRENDS

Emerging trends

27 Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

Amendment to the CELs Rules

The Ministry of Energy (SENER) amended the 'Rules for the granting of Clean Energy Certificates and the requirements for their acquisition' on 28 October 2019 (the Amendment to the CELs Rules), so that the grandfathered power plants owned by the Federal Electricity Commission (CFE), which reached commercial operation prior to the enactment of the Power Industry Law (LIE), could be granted clean energy certificates (CELs) for their full clean energy output and not just for the portion of clean energy output that resulted from an investment to increase such clean power capacity (ie, a (re)powering of the relevant power plant). Before the Amendment to the CELs Rules, the CFE's grandfathered power plants were only allowed to receive CELs as long as a (re)powering project had been performed and for an amount equal to the excess of the greater between (1) the average value of the clean energy output of the grandfathered power plant during 2012, 2013 and 2014 and (2) the average value of the clean energy output of the grandfathered power plant during the 10 years prior to the (re)powering project.

At the time of writing, the effects of the Amendment to the CELs Rules have been suspended because many *amparo* lawsuits were filed

by private (clean power) generators against the government action. The implementation of the Amendment to the CELs Rules would essentially result in an 'overflowing' of the CELs 'market' and, hence, a drastic and immediate reduction of the CELs value (CELs' price would go down to zero immediately).

Other recent actions adopted by the federal government with respect to renewable energy projects include the CENACE Order, the SENER Reliability Policy and the Energy Regulatory Commission (CRE) (Transmission) Resolution, which will increase the transmission cost for grandfathered renewable and efficient cogeneration projects.

These government actions have been severely questioned by private companies as well as NGOs (eg, Greenpeace Mexico) as they seem to negatively affect Mexico's international treaty and law-related commitments from an energy transition and climate change standpoint.

CENACE Order

On 1 May 2020, the National Centre of Energy Control (CENACE) published a resolution in the public domain area of the Market Information System (the CENACE Order) whereby, based on the contingency resulting from the preventive actions to mitigate and control the health risks associated with the covid-19 pandemic, as well as an alleged reduction in energy consumption and to strengthen the reliability of power supply, CENACE determined the implementation of a series of actions and strategies for the operational control of the National Electric System (SEN), which are further defined in the Sole Annex attached to the CENACE Order (the Technical Annex).

The considerations of the Technical Annex attached to the CENACE Order make reference to certain failures in the SEN that resulted in generation outages or power supply interruptions. Some of the failures and events described in the Technical Annex occurred in 2019 – that is, before the covid-19 pandemic. In terms of the CENACE Order, CENACE expressly states that intermittent generation from wind and solar photovoltaic (PV) power plants affects the reliability of the SEN as well as the sufficiency, quality and continuity of the power supply, and further establishes that generation facilities with such technologies do not provide any electricity grid inertia nor primary frequency response.

Pursuant to the CENACE Order, as of 3 May 2020, preoperational tests of wind and solar PV power plants, either currently undergoing preoperational tests to reach commercial operation or yet to start such process, will be suspended.

Other actions and strategies set forth in the CENACE Order include: (1) in order to control voltage regulation and reduce the opening of transmission lines, as well as to add electricity grid inertia and currents for short circuit failures, 'must run' power plants will be used in certain regions of the SEN; and (2) the operational limits of the main 'transmission corridors', based on the availability of generation assets, will be operated at magnitudes determined without depending of Remedial Action Schemes.

The CENACE Order does not define a specific term during which preoperational tests for wind and solar PV power plants will be suspended or not subject to authorisation (although the Order seems to suggest that its effects will apply for the duration of the pandemic). Moreover, the action adopted by CENACE consisting of suspending or not authorising preoperational tests for power plants with wind and solar PV technologies applies generally throughout the SEN without making any distinction among specific transmission regions, influence areas or specific interconnection points, and without elaborating on any reasons or causes.

Finally, CENACE does not propose any solution to the situation that it intends to address through the CENACE Order; thus, there is concern for wind and solar PV facilities that are currently under development regarding the feasibility of starting or continuing with preoperational tests and, eventually, reaching commercial operation.

SENER Reliability Policy

On 15 May 2020, SENER published the 'Resolution whereby the Policy on Reliability, Safety, Continuity and Quality of the National Electric System is issued' (the Reliability Policy) in the Federal Official Gazette. The objective of the Reliability Policy is to establish the general guidelines that allow government authorities of the energy sector to guarantee power supply in the SEN under the principle of reliability. The Reliability Policy became effective on 16 May 2020. Its content does not really constitute a public policy instrument, but mainly sets forth general provisions on the planning and operation of the SEN and the Mexican Wholesale Electricity Market (MEM).

Based on the arguments that (1) the planning and control of the SEN, as well as the transmission and distribution of public services, are strategic areas that correspond exclusively to the state, and (2) SENER has the authority to establish a policy on efficiency, quality, reliability, continuity, safety and sustainability in the SEN according to article 132 of the LIE, SENER makes material regulatory changes in structural aspects of the SEN and the MEM, including, among other things:

- additional conditions for obtaining generation permits and performing interconnection studies in order to interconnect power plants to the National Transmission Grid and the General Distribution Grids;
- rules for the assignment and dispatch of power plants (with priority given to the dispatch safety principle over the economic efficiency criteria); and
- requirements for new ancillary services in and outside the MEM.

The Reliability Policy places particular emphasis on the alleged link between the intermittence (variability) of the energy output from intermittent renewable power plants (specifically, wind and solar PV facilities) and the reliability (or lack thereof) in the SEN. In this regard, the Reliability Policy imposes additional procedures, analysis requirements, rules and costs aimed at intermittent renewable energy facilities for the purposes of their interconnection to the National Transmission Grid and the General Distribution Grids (especially for those projects without a generation permit or an interconnection agreement), dispatch in the MEM and, generally, operation in the SEN. These additional requirements and costs, as well as the changes to the economic dispatch principle, put at risk current and future investments in the renewable energy sector – which will also harm Mexico's clean energy and GHG emissions reduction goals.

CRE (Transmission) Resolution

On 28 May 2020, the CRE approved Resolution No. RES/893/2020, whereby the CRE issued the (new) transmission rates for private companies that executed grandfathered interconnection agreements with the CFE in connection with renewable and efficient cogeneration power plants (the CRE (Transmission) Resolution). In light of the CRE (Transmission) Resolution, CFE Intermediación de Contratos Legados, SA de CV (CFE ICL) published the new transmission rates approved by the CRE, which must be paid by owners of grandfathered renewable and efficient cogeneration power plants to CFE ICL. The CRE (Transmission) Resolution resulted in an increase of between 500 per cent and 900 per cent to the transmission costs of grandfathered renewable and efficient cogeneration projects.

Despite the fact that grandfathered projects have acquired rights that are protected pursuant to constitutional principles and the transitory articles of the LIE, the CRE considered that it was necessary to increase the transmission rates so that they would, allegedly, reflect efficient costs for the purposes of rendering the transmission and distribution public service.

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Effects of the policies

The effects of the CENACE Order, the SENER Reliability Policy and the CRE (Transmission) Resolution have been subject to multiple *amparo* lawsuits (a form of constitutional challenge in Mexico) filed by private companies as well as associations such as Greenpeace Mexico, AC and Defensa colectiva, AC. These *amparo* lawsuits have resulted in provisional and definitive injunctions that suspend the effects of these new rules and regulations during the course of the relevant *amparo* proceedings. Moreover, the Mexican Supreme Court has also granted suspensions against the Reliability Policy in favour of the Federal Antitrust Commission and some state governments (eg, Tamaulipas) as a result of certain constitutional challenges filed by these government authorities.

Overall, the actions taken by the government in relation to the renewable energy sector have been scrutinised and criticised by several stakeholders. At face value, the energy transition strategy of the administration seems to focus more on fostering fossil fuel power plants (eg, SENER has been more vocal about the benefits of coal power plants than about wind and solar PV projects).

Coronavirus

28 What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

Although the purpose of the CENACE Order was, presumably, to address certain reliability problems in the SEN owing to an alleged reduction of energy consumption in the system as a result of the covid-19 pandemic, it seems that the real intent was different (probably, to displace wind

and solar facilities that were about to reach commercial operation) and that is why many private generators and NGOs filed *amparo* challenges against the government action.

South Korea

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

Korea is a contracting state to the following international agreements or regulations on climate matters:

- the United Nations Framework Convention on Climate Change;
- the Kyoto Protocol to the United Nations Framework Convention on Climate Change;
- the Vienna Convention for the Protection of the Ozone Layer;
- the Montreal Protocol on Substances that Deplete the Ozone Layer;
- the London Amendment to the Montreal Protocol;
- the Copenhagen Amendment to the Montreal Protocol;
- the Montreal Amendment to the Montreal Protocol;
- the Beijing Amendment to the Montreal Protocol;
- the Marrakesh Accords; and
- the Paris Agreement.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

Under article 6 of the Constitution of the Republic of Korea, treaties duly concluded and promulgated under the constitution shall have the same effect as the domestic laws of Korea. As such, Korea carries out its obligations under international agreements through the enactment of domestic laws, regulations and policies.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

In June 2019, the Third Basic Plan for Energy (for 2019–2040) was announced by the Korean government, in which the government reaffirmed its commitment to gradually phase out nuclear energy and increase the proportion of the renewable energy-based power supply to 30–35 per cent by 2040 (from 7.6 per cent in 2017). Specifically, the Korean government plans to: (1) reduce the total energy consumption in Korea by 18.6 per cent to 171.8 million tonnes of oil equivalent (TOE) by 2040; (2) improve energy efficiency by 38 per cent by regulating energy demand by sector; (3) reduce the energy consumption of energy-intensive businesses through cooperative agreements with the businesses; (4) introduce a new fuel efficiency standard for medium-sized to large cars by 2022; and (5) rationalise the energy pricing model by adopting green pricing or implementing corporate power purchase agreements.

In December 2019, the Korean government established the Third Basic Plan for Emissions Trading Scheme, which evaluated the first and second phase of the Emissions Trading Scheme and provided an outline

for the third phase (2021–2030). According to this Third Basic Plan, the government plans to revise the existing allocation system, enhance the market system of emissions trading and strengthen cooperation for international carbon credit trading, etc, for the third phase.

Main national legislation

- 4 | Identify the main national laws and regulations on climate matters.

The Korean government's policies on climate matters are established by the Framework Act on Low Carbon, Green Growth (the Carbon Act) and the Act on the Allocation and Trading of Greenhouse-Gas Emission Permits (the GHG Allocation Act). In addition, the regulatory framework for new and renewable energy in Korea is established by the Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy (the Renewable Energy Act).

National regulatory authorities

- 5 | Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

The primary governmental authority in charge of climate change-related regulations is the Ministry of Environment (MOE). Under the initiative of the MOE, the Korean government establishes the basic plans for emissions trading (within the inclusion of national GHG emission targets) every five years. To achieve this target, the MOE also implements plans for the allocation of GHG emission allowances.

Moreover, the Carbon Act provides for the Committee on Green Growth, which formulates plans for climate change, energy and sustainable development. The Committee comprises the Prime Minister as the chairperson, the Ministers of Strategy and Finance; Science and ICT; Trade, Industry and Energy; Environment; Land, Infrastructure and Transport; and members from private sectors.

The Ministry of Trade, Industry and Energy is responsible for energy-related matters that may also have implications for climate change.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 | What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

According to National GHG Inventory Report of Korea for 2017, as of 2015, the main sources of emissions of GHG in Korea and their respective quantities of emissions are: (1) energy industries based on solid

fuel (189,842.17Gg CO₂e); (2) manufacturing industries and construction based on solid fuel (127,598.08Gg CO₂e); and (3) road transportation (89,424.51Gg CO₂e).

In 2015, the Korean government introduced a GHG emission allocation system and a national cap-and-trade system (commonly known as the Korea Emission Trading Scheme), which established reduction obligations for the nation's 639 largest greenhouse gas emitters from both the public and private sectors.

National GHG emission projects

- 7 | Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

Korea recognises the offset of emission rights. Businesses eligible for allowances allocation may request the competent authority to convert all or some of its GHG emission reductions generated from an external project that complies with international standards. Upon such a request, the competent authority makes the conversion and registers the Korean Offset Credits in the offset registry (article 29(1), (2) of the GHG Allocation Act). However, only certified GHG reductions from an external project may be converted, with some examples being reductions generated through a GHG reduction project implemented in a measurable, reportable and verifiable manner in compliance with international standards or GHG reduction project defined in the United Nations Framework Conventions on Climate Change and relevant protocols (article 30).

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 | Describe the main commercial aspects of the climate sector in your country, including any related government policies.

Under the Korea Emission Trading Scheme (K-ETS), businesses whose total annual emissions are 125,000 tCO₂e or more or companies with places of business whose annual emissions are 25,000 tCO₂e or more (eligible emitters) are allocated emission allowances and are obligated to surrender these allowances if they are equal to the business's volume of verified emissions of the previous compliance year. For any shortfall or excess, GHG emission allowances are traded among businesses within the K-ETS market.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

On 30 June 2015, the Korean government submitted its Intended Nationally Determined Contribution (INDC). The INDC was a proposal to designate an economy-wide target to reduce GHG emissions by 37 per cent below its BAU emissions level (ie, 850.6 MtCO₂e) by 2030.

The above obligation does not apply directly to private parties in Korea, but private parties such as eligible emitters have certain obligations under the GHG Allocation Act to reduce their GHG emissions or to purchase the GHG emission allowances from the Korea Emission Trading Scheme (K-ETS) market.

GHG emission permits or approvals

- 10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

Companies with a certain amount of annual GHG emissions are automatically designated by the Korean government as eligible emitters and become subject to an application for allocation, annual reporting of emissions, verification and certification thereof, and surrendering of emission allowances under the K-ETS. Companies that are not designated as eligible emitters are not required by the government to obtain GHG emission permits or approvals.

Oversight of GHG emissions

- 11 | How are GHG emissions monitored, reported and verified?

Each eligible emitter must prepare a report on the amount of GHG emissions produced by it during a compliance year in a measurable, reportable and verifiable manner and submit the report to the competent authority within three months of the end of the compliance year (article 24 of the GHG Allocation Act). Upon receipt of the report, the competent authority must evaluate the validity of the details in the report and certify the actual amount of GHG emissions produced by the business (article 25). The Emissions Certification Committee was established to deliberate and decide on technical matters regarding the evaluation of validity and the certification of amounts of actual GHG emissions (article 26).

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

- 12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

The Korea Emission Trading Scheme (K-ETS) is a GHG emission allowance regime in Korea. Emission allowances are allocated to eligible emitters through free allocation, an auction or a combination of both methods. Each eligible emitter can emit GHG in the amount equivalent to the number of emission allowances it owns and surrenders to the competent authorities. If an eligible emitter exceeds its emission limits, it may be subject to administrative fines; to avoid this, eligible emitters may choose to purchase emission rights in the K-ETS market.

Registration

- 13 | Are there any GHG emission allowance registries in your country? How are they administered?

Korea has established the Emissions Trading Registry and the Offset Registry to operate and manage GHG reduction registration as part of the K-ETS.

Obtaining, possessing and using GHG emission allowances

- 14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

To obtain GHG emission allowances by means of free allocation, an eligible emitter must prepare an application for allocation. This application should state the total number of emission allowances applied for in the given phase, the number of emission allowances applied for in each compliance year and the amount of GHG emissions during the three years immediately preceding the year in which the applicant was

designated as an eligible emitter. The application should be filed with the competent authority no later than four months prior to the beginning of each phase (article 12 of the GHG Allocation Act). The phases are from 2015 to 2017 (Phase I), from 2017 to 2019 (Phase II) and from 2020 every five years thereafter (Phase III and thereafter). Any objections with regard to the allocation must be made within 30 days (article 38).

The criteria for allocation are prescribed in detail in regulations under the GHG Allocation Act, such as by article 12(2) of the Enforcement Decree of the same Act and the Guidelines on the Allocation, Adjustment and Cancellation of GHG Emission Allowances.

The competent authority may, ex officio or upon receipt of an application, allocate additional emission allowances or adjust the number of emission allowances to be allocated for each compliance year within each phase if the total emission allowances increase following a revision to an allocation plan or establishment or expansion of facilities, or another cause or event during a phase necessitates additional allocation of emission allowances (article 16 of the GHG Allocation Act).

An allocation of emission allowances may be revoked in part or in full under the following circumstances: where total emission allowances decrease following a revision to an allocation plan; where a business entity eligible for allocation closes all or a part of its facilities; or where it is discovered that a person obtained allocation of emission allowances by fraud or other illegal means (article 17).

After annual reporting of the actual amount of emissions from the previous compliance year, each eligible emitter shall have its reporting verified by a third party and have it reviewed and certified by the Certification Committee of the Ministry of Environment. Following this report, verification and certification, each eligible emitter must surrender to the competent authorities a quantity of emission allowances equal to the volume of its verified or certified emissions of the previous compliance year.

Trading of emission allowances must be reported to the competent authority, which will then register the transaction with the Emissions Trading Registry (article 21(1), (2)). As the transfer of emission allowances becomes effective only when the relevant transaction is registered with the Emissions Trading Registry, creating rights in favour of third parties (eg, pledges) on allowances and enforcing them is not possible in Korea. As for the trading of emission derivatives, the provisions of the Financial Investment Services and Capital Markets Act apply (article 28 of the Enforcement Decree of the GHG Allocation Act).

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

- 15 | What GHG emission trading systems or schemes are applied in your country?

A person intending to trade emission allowances must register his or her account in the GHG emission allowances registry to participate in the transactions (article 20 of the GHG Allocation Act). Emission allowances may be traded by the unit of GHG converted into tons of comparable CO₂ equivalents (CO₂e) (article 19). To promote the setting of a fair price of emission allowances, fair trade of emission allowances and the stability and efficiency of trading emission allowances, Korea Exchange (KRX) is designated as the emission allowances exchange (article 22). Both exchange and off-exchange transactions are possible.

The transfer of emission allowances following a transaction shall take effect at the time the details of the transaction of the emission allowances are reported and registered in the Emissions Trading Registry (article 21(3)).

Trading agreements

- 16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

No. With the exception of exchange transactions and applicable operation rules on such exchanges, standard agreements for off-exchange transactions do not exist in Korea.

SECTORAL REGULATION

Energy sector

- 17 | Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

Korea has no oil resources and is highly dependent on external energy sources, with net imports accounting for 87 per cent of its total primary energy supply. The energy mix is carbon-intensive: fossil fuels accounted for 82 per cent of total primary energy supply. In 2013, manufacturing and energy industries accounted for the most GHG emissions, followed by transport, industrial processes, agriculture and waste management.

The GHG Allocation Act and the Korea Emission Trading Scheme (K-ETS), as well as the Renewable Energy Act and the Renewable Portfolio Standard, are the primary sources of regulations pertaining to GHG emissions and renewable energy.

Other sectors

- 18 | Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

Energy production and consumption are taken into consideration for Korean's management of the GHG emissions through the K-ETS. For instance, eligible emitters under the K-ETS consist of diverse sources of GHG emissions including, without limitation, energy, industries (petrochemicals, cement, steel, non-ferrous metals, semiconductors, electronics, automobiles, etc), wastes and buildings.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 | Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

Since 2012, the Korean government has implemented the Renewable Portfolio Standard scheme pursuant to the Renewable Energy Act, converting from the previous feed-in-tariffs regime. Additionally, the government required companies with generation capability of 500MW or more to generate a certain minimum percentage of gross power from renewable energy sources. Currently, 22 large power companies in Korea are subject to this obligation. The current renewable generation quota obligations are set out as follows. However, the Moon Jae-in administration is in the process of revising the ratios and it is expected that they will be adjusted to a higher level.

Annual supply rates	
Year	Ratio (%)
2012	2.0
2013	2.5
2014	3.0
2015	3.0
2016	3.5
2017	4.0
2018	5.0
2019	6.0
2020	7.0
2021	8.0
2022	9.0
2023	10.0

Under the Renewable Energy Act, a renewable energy certificate (REC) is defined as a 'certificate authenticating the fact of supply by using new or renewable energy facilities'. A REC is based on each megawatt hour (MWh) of electricity generated from a renewable energy resource. RECs are issued by the New and Renewable Energy Centre and are tradable in Korea. RECs are typically sold to one of 22 large power generation companies that are obligated to generate a certain percentage of their generation output from a renewable energy source. Failure to meet the obligatory generation quota may result in administrative fines of an amount equivalent to 1.5 times the average trading price of RECs.

Renewable energy is monitored by the Korea Electric Power Corporation (KEPCO), which verifies the amount of renewable energy generated. If a company produces renewable energy, in addition to RECs, it can also get a certified emission reduction (CER) credit for greenhouse gas emissions by registering with the United Nations as a Clean Development Mechanism (CDM) project. The renewable energy is integrated into KEPCO's electricity grid network because the electricity generated from the renewable source can be sold only through Korea Power Exchange (KPX). In this regard, the Korean renewable energy producers earn revenue by selling electricity to KEPCO through KPX plus additional income by trading RECs.

As at July 2020, the price of one unit of REC is 45,000 Korean won.

Wind energy

20 | Describe, in general terms, any regulation of wind energy.

To engage in the renewable energy business in Korea, the developer must secure ownership or lease rights of the land on which the power plant will be located, and obtain necessary licences from the local government where the land is located. For large-scale power generation projects (over 100,000kW), an environmental impact assessment must be carried out and approved by the Ministry of Environment.

The time frame for obtaining approval for the development of a utility-scale renewable energy project often depends on the type of renewable source. For example, for onshore wind, the approval process normally takes about four years from filing the application with the government, whereas for solar power the approval may be granted within a year. In the case of a large-scale project, it may take longer than usual to obtain the approval, since it requires an environmental impact assessment.

In Korea, there are special protocols for intermittent energy sources such as wind and solar. When an energy storage system (ESS) is linked to supplement the intermittent energy, additional REC weighting is given in the range of 4.0–5.0 units depending on the type of renewable energy source. The highest weighting (5.0 units) is given to solar farms linked with an ESS.

The current REC weighting was decided by the Ministry of Trade, Industry and Energy in 2020, taking into consideration: the impacts on the environment; technology development and industrial revitalisation; power generation cost; resource potential; effects on reduction of greenhouse gas emissions; effects on power supply stability; and level of acceptance of local residents (article 18-9 of the Enforcement Decree of the Renewable Energy Act).

According to the adjustments made in 2018, the Korean government maintained the REC weighting of 1.0 for onshore wind power, but the REC weightings for offshore wind power were increased depending on its distance from the shore to attract more investment. For offshore wind power within 5km from the shore, the REC weighting was increased from 1.5 to 2.0; for 5 to 10km from 2.0 to 2.5; for 10 to 15km from 2.0 to 3.0; and for 15km or further from 2.0 to 3.5.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

As of 2020, the REC weighting given to solar energy ranges from 1.2 to 4.0. However, in 2018, the REC weighting for solar power plants installed in forests was lowered from 0.7–1.2 to 0.7 for all cases, resulting in poor profitability of solar power and inviting opposition from solar power generators.

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

As of 2020, the REC weighting given to hydropower is 1.0; for geothermal, wave and tidal it is between 1.0 and 2.5.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

As of 2020, the REC weighting given to waste-to-energy has been lowered to 0.25, considering its effects on environmental pollution and residential acceptability.

Biofuels and biomass

24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

Under the Renewable Energy Act, Korea has implemented the Renewable Fuel Standard (RFS), which is a government policy to blend new and renewable energy fuels into transport fuels (article 23-2). Persons subject to the RFS are petroleum refinery businesses and petroleum export-import businesses. In the case of transport fuels, biodiesel (BD) is mixed into diesel oil for automobiles. The mandatory blending ratios for each implementation year are as follows.

Year	2015	2016	2017	2018	2019	From 2020
Mandatory blending ratio (%)	BD 2.5	BD 2.5	BD 2.5	BD 3.0	BD 3.0	BD 3.0

RECs are issued for power generated using biodiesel or biomass. In 2018, owing to environmental concerns, the Korean government decided to discontinue giving REC weighting to woodchip biomass that is blended into coal power generation, and lowered the REC weightings for other usages of biofuels and biomass from 0.5–1.0 to 0.25–0.5).

Carbon capture and storage

- 25 | Describe, in general terms, any policy on and regulation of carbon capture and storage.

In August 2016, the Korean government announced carbon resources technology including carbon capture and storage (CCS) as one of Korea's nine National Strategic Projects. The Korean government is exploring the feasibility of the CCS project in Korea and is supporting the technological developments that are expected to contribute to reductions of GHG. If CCS technology is commercialised, the project may be approved as a CDM project subjecting itself to the issuance of CER credits or it can be used to capture and store GHG from the atmosphere by the companies themselves for the reduction of GHG emissions.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

- 26 | What are the main climate matters and regulations to consider in M&A transactions and other transactions?

During due diligence investigations, the buyer must verify (1) whether the seller is subject to the Greenhouse Gas Target Management System (and is obliged) to limit its emissions of GHG and (2) whether it is a mandatory supplier under the Renewable Portfolio Standard, and if so, (3) whether the seller has duly complied with these climate-related regulations.

UPDATE AND TRENDS

Emerging trends

- 27 | Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

Under the national cap-and-trade system of Korea, Clean Development Mechanism (CDM) projects implemented abroad may be certified by the Korean government as external projects under the GHG Allocation Act. Once certified, the certified emission reductions (CERs) from such CDM projects can be converted into Korean Offset Credits (KOCs), which can either be traded in the Korean market or be converted to Korean Credit Units to be used to offset the GHG emissions. Owing to the anticipated transition from CDM under the Kyoto Protocol to Sustainable Development Mechanism introduced under the Paris Agreement, many domestic corporations are paying close attention to its potential implications on the conversion of CERs to KOCs by the Korean government.

Currently, amendments to relevant laws and regulations are being made to implement the Third Basic Plan for the Emissions Trading Scheme. For example, the recently amended GHG Allocation Act (effective as of 1 June 2020) changed the standard of allocation from 'facility' to 'place of business' and designated the Korea Development Bank, among others, as a market maker, in addition to several other changes.

Coronavirus

- 28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

No specific climate-related legislation or relief programmes went into effect following the outbreak of the unprecedented covid-19 pandemic. That said, considering the ongoing unexpected and uncertain economic impacts resulting from the pandemic, it is anticipated that companies



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will experience an increased number of claims related to covid-19 around the world, including Korea. As such, taking proactive steps to assess the applicable legal principles – such as force majeure, the doctrine of frustration of contract, and hardship – will help companies prepare for the financial and legal ramifications they may experience.

Spain

Carlos de Miguel and Jesús Andrés Sedano Lorenzo

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

Spain adopted the United Nations Framework Convention on Climate Change (UNFCCC) on 9 May 1992, which entered into force on 21 March 1994. The UNFCCC was developed by the Kyoto Protocol on 11 December 1997, which was ratified by Spain on 29 April 1998. The Kyoto Protocol provided for certain emission targets of greenhouse gases and established a specific time frame for their fulfilment. On 22 April 2016, Spain ratified the Paris Agreement resulting from the Paris climate conference (COP 21). The agreement sets out a global action plan to avoid dangerous climate change by limiting global warming to well below 2°C, and its main obligations apply from 2020 henceforward.

The European Union has approved several regulations on climate change with the aim of obtaining a reduction of the GHG emissions of the member states. Directive 2003/87/EC of 13 October 2003 (as subsequently amended) establishing a scheme for greenhouse gas emission allowance trading within the EU is the main regulation approved by the EU. This Directive was implemented in Spain through Law No. 1/2005 of 9 March 2005 (also amended several times to implement the amendments to the Directive).

The EU has also approved the 2030 climate and energy framework that sets three key targets for 2030:

- at least a 40 per cent cut in greenhouse gas (GHG) emissions (from 1990 levels);
- at least a 27 per cent share of renewable energy; and
- at least a 27 per cent improvement in energy efficiency.

The framework was adopted by EU leaders in October 2014 and was built on the 2020 climate and energy package.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

Spain is a party to all relevant treaties, such as the UNFCCC, the Kyoto Protocol and the Paris Agreement. Spain is also an EU member state. Therefore, the Spanish internal regulations and policies are highly influenced by international and European regulations and objectives. Indeed, the aim of most of the Spanish regulations and policies on climate change is to comply with the objectives and policies previously set by the European authorities. In addition, other policies, such as those on construction and waste, also take into consideration climate change concerns.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

According to the information published by the Ministry for Ecological Transition, the main guides of the climate change policy of the current government consist of:

- integrating climate change in all the public policies that could affect the climate;
- coordinating all public authorities to avoid duplication and to optimise the use of the available resources and information;
- managing Phase III of the EU Emissions Trading Scheme (EU ETS);
- preparation of a roadmap to reduce GHG emissions in several industry sectors; and
- promoting and developing the Spanish Carbon Fund to increase the number of national initiatives to help reduce GHG emissions.

Main national legislation

- 4 | Identify the main national laws and regulations on climate matters.

The main national laws and regulations on climate change are as follows:

- Law No. 1/2005 of 9 March 2005 regulating the GHG emissions trading scheme (as amended);
- Law No. 40/2010 of 29 December 2010 on the geological storage of carbon dioxide;
- Law No. 2/2011 of 4 March 2011 on sustainable economy;
- Royal-Decree No. 1722/2012 of 28 December 2012 implementing aspects relating to the assignment of emissions allowances within the framework of Law No. 1/2005;
- Royal-Decree No. 235/2013 of 5 April 2013 approving the basic procedure for the energy efficiency certification of buildings;
- Royal-Decree No. 163/2014 of 14 March 2014 creating the carbon footprint, offset and carbon dioxide absorption projects registry; and
- Royal-Decree No. 56/2016 of 12 February 2016 on energy efficiency relating energy audits, accreditation of providers of energy services and auditors, and promotion of the efficiency of energy supply.

The regional authorities have also issued certain rules of their own on climate change matters.

National regulatory authorities

- 5 | Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

The Ministry for Ecological Transition is the administrative body that, at a national level, is responsible for the implementation and administration of climate change policies.

Within that Ministry, certain subsidiary administrative bodies have been created with different responsibilities, such as:

- the Spanish Climate Change Office (in charge of setting out the national climate change policy);
- the National Climate Commission (in charge of issuing recommendations in relation to climate change-related plans, programmes and lines of action); and
- the Climate Change Policies Coordination Committee (which coordinates the national authorities and the authorities of the autonomous regions).

In addition, the autonomous regions have created specific bodies to implement policies on climate change within the scope of their competences. Among other matters, regional authorities are competent to issue the authorisation that activities subject to the EU ETS are required to have.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 | What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

According to the National Inventory of GHG Emissions of 2018 (published in June 2019), in 2018, Spain emitted 332.8 tonnes of CO₂ equivalent. 44 per cent of GHG emissions in Spain came from power production and transport activities, 19 per cent from industrial activities (including waste management activities) and 12 per cent came from agricultural activities.

No specific limits on GHG emissions apply in Spain. However, activities subject to the EU Emissions Trading Scheme (EU ETS) must obtain specific authorisation and must have emission allowances covering their emissions to achieve a global reduction of emissions at the national level.

Those facilities that do not belong to sectors or subsectors exposed to a significant risk of carbon leakage could receive free GHG emission allowances in a percentage that in 2020 could not exceed the 30 per cent of their total GHG emissions. From 2013 to 2020, the activities included in the sectors or subsectors exposed to a significant risk of carbon leakage will receive free GHG emission allowances covering 100 per cent of their emissions.

Since 2013, free allowances have not been allocated to electricity generators, capture facilities, pipelines for transport or carbon dioxide storage sites. These activities must acquire GHG emission allowances for an amount equivalent to their total GHG emissions per year.

National GHG emission projects

- 7 | Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

The Spanish authorities have promoted different projects with the aim of reducing GHG emissions. One example is the climate projects developed by means of the Spanish Carbon Fund (FES-CO₂). The goal of this fund is to contribute to build a low-carbon model productive system. These climate projects are executed in Spain and are developed in the 'diffuse sectors' (not subject to the EU ETS), such as the transport, residential or waste sectors.

In 2012, during the first round of the climate projects, the FES-CO₂ approved the acquisition of the reductions generated by 37 projects. In 2018, 64 projects were approved. The projects included biogas, biomass and purine plants, climate control projects and electric car-related projects, among others.

Additional examples of projects aimed at emissions reduction are as follows:

- the Environmental Promotion Plan (PIMA SOL, approved by Royal-Decree No. 635/2013) aims to reduce GHG emissions in the Spanish tourism industry – specifically, it promotes the reduction of direct GHG emissions at hotel facilities;
- the PIMA Company Plan, approved on 6 November 2015, includes subsidies for the companies to reduce their GHG emissions; and
- the PIMA Waste Plan, approved on 2015 and renewed on 2018, and the PIMA 'Frío' approved by Royal-Decree 1114/2018, which includes measures aimed at reducing GHG emissions in the fields of waste production management and distribution of frozen foods, respectively.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 | Describe the main commercial aspects of the climate sector in your country, including any related government policies.

The intention of the Spanish policy is that climate change concerns permeate the economy as a whole so that it becomes more efficient from this point of view. However, there are certain Spanish economic sectors that have been more affected by climate change policies than others. It may be considered that the sectors that felt the new regulations on GHG emissions more intensely are those included in the non-diffuse group, namely power production facilities and cement production.

In addition, public investments have been carried out to promote renewable energies to substitute conventional energy based on fossil fuels.

The transport industry has also been directly affected, as the aviation industry has been included within the EU Emissions Trading Scheme. The Spanish government has approved the Strategic Infrastructure and Transportation Plan with the aim of promoting public transport as an alternative to using private vehicles.

Other economic sectors are also affected by policies directly or indirectly linked to climate change policies. The construction sector is one example: the Technical Building Code (Royal-Decree No. 314/2006), the Regulation on the energy efficiency certificate (Royal-Decree No. 235/2013) and the Regulation on energy audits (Royal-Decree No. 56/2016) impose energy efficiency-related criteria for new buildings constructed or refurbished.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

To comply with international commitments on climate change, the EU promoted the '20-20-20' initiative for 2020, consisting of reaching a 20 per cent reduction in EU primary energy consumption, a further 20 per cent reduction in GHG emissions and increasing the contribution of renewable energies to 20 per cent of consumption.

To reach that goal, the Spanish authorities have approved several regulations aimed at reducing GHGs in different sectors, such as:

- agriculture (eg, the Practical Guide to the Rational Fertilisation of Crops in Spain, which implements one of the core pillars of the Plan for the Reduction in the Use of Nitrogenised Fertilisers);
- livestock (eg, the 2008 Purine Biodegradation Plan);
- forestry (eg, the Spanish Forestry Plan);
- tourism (eg, Royal-Decree No. 635/2013 implementing the PIMA SOL Environmental Promotion Plan);
- waste (eg, Law No. 22/2011 on waste and polluted land);
- transportation (eg, the Spanish Strategic Sustainable Mobility Plan);
- public procurement (eg, the Green Public Procurement Plan); and
- renewable energies (the Spanish Climate Change and Clean Energy Strategy, Horizon 2007-2012-2020).

GHG emission permits or approvals

10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

All facilities included in Annex I of Law No. 1/2005 that generate the emissions specified in that annex must obtain an authorisation to emit GHGs, unless the facility is considered a small one. Any change in the nature, operating procedures, size of the facilities or any other change entailing a significant enlargement or reduction to the capacity of the facilities, as well as any change affecting the identity or domicile of the operator, must be notified to the authorities.

The content of the authorisation to emit GHGs may be included in the integrated environmental authorisation when this authorisation is required.

Oversight of GHG emissions

11 | How are GHG emissions monitored, reported and verified?

According to Law No. 1/2005, activities that emit GHGs are obliged to send to the competent regional authority, before 28 February every year, a verified report on GHG emissions of the previous year evidencing the fulfilment of the requirements of their authorisation. This report will be assessed by the relevant authorities to verify (among other circumstances) that the operator has obtained all the required GHG emission allowances.

Law No. 1/2005 also provides for certain specific requirements applicable to the aviation operators. These operators must deliver a certified report to the Ministry of Development, which will assess the report and, if approved, notify the Ministry for Ecological Transition so that it may record the emissions in the emissions allowances registry.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

Activities subject to the EU Emissions Trading Scheme must obtain a specific authorisation to emit GHGs.

Once the GHG emissions authorisation is obtained, the operator should request for the allocation of GHG emission allowances it may be entitled to. A GHG emission allowance is defined as the subjective right to emit an equivalent tonne of carbon dioxide from a facility or an aircraft for a given period.

The existing trading period that started on 1 January 2013 will last for eight years (ie, until the end of 2020). Thereafter, successive eight-year periods will follow. In the period 2013 to 2020, the auction will become the main method for the allocation of emissions allowances

according to the rules contained in Commission Regulation (EU) No. 1031/2010 of 12 November 2010 (as amended).

In certain cases, Law No. 1/2005 provides for the allocation of free emissions allowances. In these cases, the facility owners should file an application before the Ministry for Ecological Transition applying for GHG emission allowances allocations 22 months before the commencement of each trading period. Emission allowances will be allocated by the Council of Ministers.

The facilities included in sectors and sub-sectors exposed to carbon leaks would be granted 100 per cent free allocation. In addition, other facilities could receive individual allocations that would be free for a maximum of 80 per cent of the total allocated rights; the percentage of the free allowances will gradually decrease with the aim of reaching 30 per cent in 2020.

It is important to note that power generators and facilities involved in the capture, transportation and geological storage of carbon would not receive any free allowance except certain high-efficiency cogeneration and urban heating.

Furthermore, certified emission reductions or emission reduction units obtained by means of the flexibility mechanisms could be used to fulfil the obligation of delivering a number of emission allowances equivalent to the figure of verified emissions.

In addition, 5 per cent of the total amount of available emission allowances at EU level for the period 2013 to 2020 will be reserved for new entrants.

Registration

13 | Are there any GHG emission allowance registries in your country? How are they administered?

The Spanish GHG emission allowance registry is included in the EU Registry of the Consolidated System of European Registries, which is managed by the European Commission.

Obtaining, possessing and using GHG emission allowances

14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

Once the authorisation to emit GHGs has been obtained, activities subject to the GHG regime must obtain emission allowances. Auctions should be carried out according to the rules contained in the Commission Regulation (EU) No. 1031/2010 on the timing, administration and other aspects of auctioning of GHG emission allowances pursuant to Directive 2003/87/EC. In addition, emission allowances can be purchased in the market.

The issue, ownership, transfer, surrender, delivery and cancellation of emission allowances must be registered at the Emission Allowance Registry.

The question of pledging the emission allowances is not a settled matter and there is no relevant experience in Spain in this regard. This possibility is not expressly included in the applicable regulation but it is not forbidden either.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

15 | What GHG emission trading systems or schemes are applied in your country?

Spain is subject to the EU Emissions Trading Scheme.

Trading agreements

- 16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

The standard agreements most commonly used are those of the International Emissions Trading Association and the International Swaps and Derivatives Association.

Clauses typically refer to general obligations, representations and warranties, transfer failure or assignment, among others. In practice, the clauses that usually give rise to negotiations deal with the allocation of risks or the scope of force majeure.

SECTORAL REGULATION

Energy sector

- 17 | Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

During 2019, the annual demand for electricity (including renewable and non-renewable energy) was 264.6TWh. The volume of gross non-renewable energy production in 2019 represented 61.1 per cent (59.9 per cent in 2018, and 66.3 per cent in 2017) of total electricity production.

With respect to its obligations concerning energy efficiency, for instance, the Technical Building Code (Royal-Decree No. 314/2006), the Regulation on the energy efficiency certificate (Royal-Decree No. 235/2013) and the Regulation on energy audits (Royal-Decree No. 56/2016) impose energy efficiency-related criteria for new buildings constructed or refurbished.

Therefore, Spain has made a firm commitment to renewable energies and energy efficiency, not only in new buildings but also for existing buildings.

Other sectors

- 18 | Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

In addition to Law No. 1/2005 and its developing regulations, which affect different economic sectors (power and cement production, tiles, etc), some other sectoral regulations and policies have been passed to contribute to the reduction of GHG emissions. For example:

- the Spanish Forestry Plan provides for initiatives to promote the capture of CO₂ by Spanish forests;
- the Strategic Infrastructure and Transport Plan, encouraging forms of transport as an alternative to the private vehicles;
- Royal-Decree No. 235/2013 regulating the energy efficiency certificate with the aim of guaranteeing the energy efficiency of buildings when constructed;
- Royal-Decree No. 56/2016 on energy efficiency relating energy audits, accreditation of providers of energy services and auditors, and promotion of the efficiency of energy supply; and
- Law No. 24/2013 of 26 December 2013 of the electricity sector and Royal-Decree Law No. 8/2014 of 4 July 2014, which provide for certain efficiency obligations.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 | Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

The generation of renewable energy has been strongly promoted by the public authorities by means of special economic conditions (mainly financial incentives).

In 2019, the volume of gross renewable energy production stood at 97.8TWh (92TWh in 2018), this represents a contribution of 38.9 per cent to overall electricity generation. In addition, 50.1 per cent of the total installed power corresponds to renewable energy facilities, having surpassed non-renewable technologies for the first time.

The main renewable sources and their percentage of total generated electricity are wind power (20.8 per cent), hydroelectric (9.47 per cent), photovoltaic solar (3.54 per cent), thermosolar (1.98 per cent), waste (0.34 per cent) and other (1.38 per cent).

Wind energy

- 20 | Describe, in general terms, any regulation of wind energy.

The key pieces of legislation regulating wind energy in Spain are the following:

- Law No. 24/2013 of 26 December 2013 of the electricity sector;
- Royal-Decree No. 413/2014 of 6 June 2014 regulating electricity generation using renewable energy sources, cogeneration and waste;
- Order IET/1045/2014 of 16 June 2014 approving the remuneration parameters for standard facilities applicable to certain facilities generating electricity using renewable energy sources, cogeneration and waste;
- Order IET/1459/2014 of 1 August 2014 approving remuneration parameters and establishing the mechanism for allocating the specific remuneration regime for new wind and photovoltaic facilities in non-mainland electricity systems;
- Royal-Decree-Law No. 9/2013 of 12 July 2013 adopting urgent measures to guarantee the financial stability of the electricity system;
- Royal-Decree-Law No. 2/2013 of 1 February 2013 on urgent measures in the electricity system and the financial sector;
- Royal-Decree-Law No. 1/2012 of 27 January 2012 suspending the procedures for pre-allocation of remuneration and eliminating financial incentives for new facilities generating electricity using renewable energy sources, cogeneration and waste; and
- Royal-Decree-Law No. 6/2009 of 30 April 2009 adopting certain measures in the energy industry and approving energy assistance relief.

The autonomous regions may also have passed regulations of their own.

Facilities for the production of wind energy must obtain an administrative authorisation after following a complex administrative procedure.

Although there has been a reduction in the public funds devoted to the promotion of this type of energy, operators still receive financial incentives from the authorities according to the specific and complex rules contained in the regulations mentioned above.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

The production of solar energy is subject to a very similar regime to wind energy from a legal and economic perspective.

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

In addition to the general regulations on the power production industry and renewable energies, there are some specific provisions applicable to the hydropower and wave and tidal energy industries. Specifically, the Law on water approved by Legislative Royal-Decree No. 1/2001 of 20 July 2001 and one of its developing regulations (Royal-Decree No. 849/1986 of 11 April 1986) provide for specific rules applicable to this kind of power production facility.

Regarding the geothermal energy industry, in addition to the general rules on power production, Law No. 22/1973 of 21 July 1973 on mines provides for specific rules that would also apply.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

The general rules on the power generation industry may apply; in addition, provisions contained in Law No. 22/2011 of 28 July 2011 on waste and polluted land should be taken into account for this purpose.

Biofuels and biomass

24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

Law No. 34/1998 of 7 October on hydrocarbons is the main regulation on biofuels in Spain. This law has been complemented by certain additional provisions regarding biofuels, such as:

- Royal-Decree No. 1597/2011 of 4 November 2011 regulating biofuels and bioliquid sustainability criteria, the National Sustainability Assessment System and the dual value of certain biofuels for calculation purposes;
- Ministerial Order ITC/2877/2008 of 9 October 2008 establishing a mechanism to promote the use of biofuels and other renewable fuels for transport purposes; and
- Royal-Decree No. 61/2006 of 31 January 2006 determining the specifications for petrol, gasoil, fuel oil and liquid petroleum and regulating the use of certain biofuels.

The installation and operation of biomass plants is subject to several administrative and environmental authorisations, as well as registrations within public registries. As with the rest of power generation plants under the special regime, if certain conditions are met a special remuneration system applies. There are different plans, both at national and regional level, promoting the use of biomass, especially those of forestry and agriculture.

Carbon capture and storage

25 | Describe, in general terms, any policy on and regulation of carbon capture and storage.

Law No. 40/2010 of 29 December 2010 on geological carbon dioxide storage establishes the main regulations on this matter. In addition, the rules contained in Legislative Royal-Decree No. 1/2016 of 16 December 2016 on integrated pollution control should be taken into account.

In addition, there are government measures on forestry and reforestation, such as the 2002 to 2032 Spanish Forestry Plan.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

26 | What are the main climate matters and regulations to consider in M&A transactions and other transactions?

Depending on the kind of companies involved in an M&A transaction or in any other transaction, the fulfilment of the obligations related to climate change provisions could be crucial. Certain industrial facilities need to purchase a specific amount of GHG emission allowances to operate. Therefore, in this kind of transaction it is very important to verify that the facilities have obtained the relevant authorisation to emit GHGs, to establish that the amount of GHG emission allowances required every year have been obtained and to verify that the company has fulfilled its obligations of obtaining, registering and returning the GHG emission allowances. Otherwise, large penalties could be imposed and the functioning of the facilities could be affected.

UPDATE AND TRENDS

Emerging trends

27 | Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

On 11 December 2019, the European Commission proposed a European Green Deal, which envisages a modern, resource-efficient and competitive economy where there are no net GHG emissions by 2050 and where economic growth is decoupled from resource use. To give it binding force, the European Commission presented a bill for a European Climate Law (Proposal for a Regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999).

In Spain, on 19 May 2020, the central government approved and sent to the Spanish parliament for processing and final approval the Bill on Climate Change and Energy Transition. This bill seeks to achieve the decarbonisation of the economy up to full climate neutrality in 2050. The key measures of the bill are:

- setting ambitious GHG emission reduction targets at a national level by 2030 and 2050;
- promoting the implementation of renewable energies and improving energy efficiency;
- banning the granting of exploration authorisations and concessions for the exploitation of hydrocarbons and reducing aid for energy products of fossil origin; and
- encouraging new models of sustainable mobility.

Thus, Spain is following the path of the European Union, its European Green Deal and the future European Climate Law, which aims to make Europe the first climate-neutral continent by 2050.

Coronavirus

28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

The central government has pointed out in the explanatory memorandum to Royal Decree-Law No. 23/2020 of 23 June, approving measures in the field of energy and other areas for economic recovery, that covid-19 has provided an opportunity to accelerate energy transition. The aim is that 'investments in renewables, energy efficiency and new production processes, with the associated economic activity and employment, will act as a green lever for the recovery of the Spanish economy'. The regulation has amended several other regulations, such as Law 24/2013 of 26 December 2013, of the electricity sector.

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

- 1 | Do any international agreements or regulations on climate matters apply in your country?

The UK has ratified the United Nations Framework Convention on Climate Change, the Kyoto Protocol and the Paris Agreement. It has signed up to the voluntary second commitment period agreed by some states under the Kyoto Protocol between 2013 and 2020.

In June 2016, the UK voted to leave the European Union (generally referred to as 'Brexit'). Under the UK's Article 50 Withdrawal Notice, and as legislated in the European Union (Withdrawal) Act 2018 (the EU Withdrawal Act), which is the act ratifying the Brexit Withdrawal Agreement into UK domestic law, the UK originally intended to exit the European Union in March 2019. However, the UK extended the withdrawal date and formally left the EU on 31 January 2020. A transition period began immediately after 'Brexit day'. The transition period is due to end on 31 December 2020. During the transition period the UK will continue to follow EU law and remain in both the EU customs union and the single market. The substance of EU law will be retained in the UK via procedures in the EU Withdrawal Act, with the exception of the treaties and acts that were not binding on the UK before the Brexit Withdrawal Agreement came into force. Therefore, changes to EU law will be legally binding in the UK until the end of the transition period. The discussion of EU law below should be read with this in mind.

While the UK remains subject to EU law, it is covered by the EU's Nationally Determined Contribution for the reduction of greenhouse gases (GHGs) under the Paris Agreement. This commits the EU to a 40 per cent reduction in GHGs by 2030 compared to 1990 levels.

The UK is currently bound by EU climate change legislation, including the EU Emissions Trading System, the Renewable Energy Directive (Directive 2009/28/EC) and the Energy Efficiency Directive (Directive 2012/27/EU). The EU's climate and energy package requires member states to achieve (with targets in place for both 2020 and 2030):

- reductions in GHG emissions from 1990 levels via the EU Emissions Trading System (EU ETS);
- increases in the share of energy from renewable sources; and
- improvements in energy efficiency and savings.

Under the EU Effort Sharing Decision, annual emission targets for the period 2013–2020 are also set for member states to cover sectors not in the EU ETS (housing, agriculture, waste and transport (excluding aviation)). These annual emission allocations vary depending on member states' levels of wealth.

From 1 January 2019, the European Commission suspended the UK from auctioning allowances, issuing any free allowances or exchanging international credits under the EU ETS, because of the UK's intention to formally exit the EU. Based on the current draft of the Brexit Withdrawal

Agreement, the UK and the EU have now reached an agreement on this matter ensuring that the UK will continue to participate in the EU ETS during the transition period to comply with the 2020 commitment. Accordingly, the UK will have the obligation to enforce the EU ETS 2020 allowance surrender obligation on 30 April 2021 with article 96 of the Brexit Withdrawal Agreement.

International regulations and national regulatory policies

- 2 | How are the regulatory policies of your country affected by international regulations on climate matters?

International and EU-level regulations on climate matters heavily influence UK regulatory policy. The UK played a prominent role in the Paris Agreement negotiations and has introduced a raft of regulation and policy to support global efforts to reduce GHG emissions and address the impacts of climate change. The UK government supports the work of the Intergovernmental Panel on Climate Change and recognises its assessments as the most authoritative view on the science of climate change.

Main national regulatory policies

- 3 | Outline recent government policy on climate matters.

Clean Growth Strategy

The main feature of UK climate change policy is the 2017 Clean Growth Strategy, which outlines the policies that are intended to meet the UK's fourth and fifth statutory carbon budgets for the mid-2020s and early 2030s respectively.

Key policies in the Clean Growth Strategy are:

- accelerating clean growth through developing world-leading green finance capabilities;
- improving business and industry efficiency (through initiatives such as a package of measures to support businesses to improve energy productivity by at least 20 per cent by 2030, an Industrial Energy Efficiency scheme, deployment of carbon capture usage and storage at scale, and other innovations);
- improving efficiency of homes and rolling out low-carbon heating;
- accelerating the shift to low-carbon transport (including ending the sale of new conventional petrol and diesel cars and vans by 2040, investing further in electric vehicle infrastructure, accelerating uptake of zero emissions taxis and buses);
- delivering clean, smart and flexible power (including the phase out of unabated coal in energy production by 2025 and improving the route to market for renewable technologies such as offshore wind);
- enhancing the benefits of the UK's natural resources (through waste strategy and funding large-scale woodland and forest creation);
- leading in the public sector (with tighter targets for 2020 for central government); and
- government leadership in driving clean growth (including annual reporting on performance).

Sector action plans

In 2017, the Department for Business, Energy and Industrial Strategy (BEIS) published the Industrial Decarbonisation and Energy Efficiency Action Plans, setting commitments from government and industry to reduce GHG emissions and improve energy efficiency in seven energy-intensive sectors: cement, ceramics, chemicals, food and drink, glass, oil and refining, and pulp and paper.

Carbon Reduction Commitment Energy Efficiency Scheme

The UK has had a Carbon Reduction Commitment Energy Efficiency Scheme (CRC Energy Efficiency Scheme) in place since 2010. It applies to large energy users in the public and private sectors across the UK not already covered by the EU ETS. This includes supermarkets, hotels, water companies, banks, local authorities and all central government departments. This is a compulsory emissions trading scheme, requiring qualifying businesses to monitor and report on their energy emissions and to purchase and surrender allowances.

In 2016, the government announced that it would close the CRC Energy Efficiency Scheme following the 2018–2019 compliance year and replace it with an increase in the climate change levy.

Organisations reported under the CRC for the last time by the end of July 2019 and, as applicable, surrendered allowances for emissions from energy supplied in the 2018–2019 compliance year by the end of October 2019.

Climate change levy

The climate change levy (CCL) was introduced in 2000. This tax is levied on non-domestic consumers of certain energy supplies and aims to encourage businesses to use less energy and obtain energy from renewable sources. The main regulations governing the scheme are the Climate Change Levy (General) Regulations 2001 (SI 2001/838).

The CCL rates were increased significantly on 1 April 2019 by 45 per cent for electricity and 67 per cent for gas, following closure of the CRC Energy Efficiency Scheme. Some tax relief is available from the CCL, including exemptions for energy used in metallurgical and mineralogical processes and a mixed-use exemption for solid fuels used in certain gasification processes. Until 2015, renewable energy generation was exempt from the CCL but is now subject to the levy. On 11 March 2020, HMRC published a policy paper on changes to rates for the CCL from 6 April 2020. This amends the main rates of CCL for 2020 to 2021 and for 2021 to 2022, to implement the government's rates announced in the 2018 Budget. The reduced rates apply to qualifying businesses in the Climate Change Agreements scheme.

Carbon price floor

Since 2013, a carbon price floor mechanism has been in place to encourage the generation of low-carbon energy by supporting and increasing the price paid for emitting carbon dioxide. The CCL rate is determined by the carbon price support rate, which is the difference between the future market price of carbon and the floor price. Under the 2018 Budget, the carbon price support rate has been frozen to £18 per tonne of carbon dioxide equivalent until 2021. The carbon price floor does not currently apply in Northern Ireland.

Capital allowances

Businesses can claim capital allowances on some energy- and water-efficient equipment, which reduce the amount of tax payable. This applies to some vehicles with low CO₂ emissions, energy-saving equipment, plant and machinery for gas refuelling stations, gas, biogas and hydrogen refuelling equipment and new zero-emission goods vehicles.

National Adaptation Programme

In July 2018, the Department for Environment, Food and Rural Affairs (Defra) published the government's second National Adaptation Programme (2018 to 2023) (NAP) under the Climate Change Act 2008. The NAP sets out objectives, policies and timescales for adapting to the impacts of climate change, until 2023.

Recent developments

In June 2019, the UK committed to reducing GHG emissions to net zero by 2050 by amending the legally binding targets under the Climate Change Act 2008.

In July 2019, the UK government published the Clean Maritime Plan, which sets out a strategy to transition to zero-emissions shipping. This plan seeks to maximise the energy efficiency of all vessels operating in UK waters and seeks to ensure that all new vessels ordered for use in UK waters are being designed with zero-emission-propulsion capability. It also sets out plans to install infrastructure to allow for low- or zero-emission marine fuel bunkering options to be readily available across the UK.

In preparation for Brexit, an Environmental Bill was introduced into Parliament, followed in January 2020 by the Department for Environment Food and Rural Affairs policy statement on the Environment Bill 2020, setting out the approach to UK law on environmental protection. In particular, the Environment Bill includes details on:

- creating a governance framework for the environment;
- establishing a new direction for resources and waste management;
- improving air quality;
- securing water services; and
- enhancing green spaces.

Main national legislation

4 Identify the main national laws and regulations on climate matters.

Climate Change Act 2008

The Climate Change Act is the main piece of climate change legislation and sets the UK's overall emissions target. In June 2019, the UK government amended this legislation, setting the annual emissions reduction target to net zero by 2050.

The Act creates a system of five-yearly carbon budgets, which set limits with a view to meeting both the overall 2050 target and the UK's EU and international obligations. Each carbon budget is split into traded and non-traded sectors. At present, the UK is in the third budget period (2018–2022), with the carbon limits set at 2,544MtCO₂e.

Emissions from international aviation and international shipping are not counted for the purposes of the UK's net zero reduction target. The government has, to date, deferred the decision on whether to include international aviation and shipping emissions in the UK's carbon budgets. However, there is some limited regulation of shipping emissions under other legal regimes.

The Climate Change Act gives the government powers to introduce new national emissions trading schemes. It also requires government reporting on climate change impact and proposals for adaptation. Renewable transport fuel obligations, energy performance in buildings, and charges for single use plastic bags were also introduced through the Act.

Energy Act 2011

The Energy Act 2011 introduced several provisions for energy efficiency. This included the 'Green Deal', which provided access to finance for energy efficiency measures in domestic and non-domestic properties. The Green Deal has been put on hold since 2015 because of negligible uptake. In July 2019, the UK government confirmed in its Green Finance Strategy that it would continue to consider options to simplify the Green

Deal Code of Practice by incorporating revisions to improve the operation of the framework.

Alongside the Green Deal, the Energy Act 2011 introduced energy efficiency obligations for buildings and energy suppliers.

Energy Act 2013

Several new initiatives were contained in the Energy Act 2013, including an obligation for the Secretary of State to set annual decarbonisation targets. It also included a range of measures for electricity market reform, including contracts for difference, capacity market rules, and the 'Renewables Obligation', which is a support mechanism for large-scale renewable electricity projects in the UK. The Energy Act 2013 also introduced an emissions performance standard, which imposes annual carbon dioxide emissions limits on operators of fossil fuel power plants.

Company law

The Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013 (SI 2013/1970) and Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (SI 2008/410) impose requirements on certain companies to report on their GHG emissions.

The Companies (Director's Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018 were passed in November 2018 and came into force on 1 April 2019. These regulations require additional reporting on emissions, energy consumption and energy efficiency action by quoted companies, large unquoted companies and large limited liability partnerships.

National regulatory authorities

- 5 Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

BEIS is the government department responsible for functions related to climate change and energy policy.

The UK also has an independent Committee on Climate Change (CCC), which advises the government on building a low-carbon economy and preparing for the effects of climate change. The CCC carries out independent analysis into climate change science, economics and policy and monitors progress in reducing emissions and achieving carbon budgets and targets.

Defra is responsible for domestic climate change adaptation policy. In addition, regulators in Scotland, Wales and Northern Ireland have roles with respect to climate change regulation and energy efficiency.

With regard to energy more generally, Ofgem is an independent body that regulates pricing, transmission and production of energy in the UK. On 9 July 2020, Ofgem announced a £25 billion fund to be used for a five-year investment programme to deliver emissions-free green energy for the UK and meet the UK government's target of net zero GHG emissions by 2050.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

- 6 What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

In June 2020, the Department for Business, Energy and Industrial Strategy published provisional UK GHG emission statistics for 2019. In brief, these statistics indicate that the UK's provisional total GHG

emissions for 2019 were 435.2MtCO₂e (of which, 351.5Mt was carbon dioxide emissions). This represents a 3.6 per cent reduction on 2018 GHG emissions and a 45.2 per cent reduction on 1990 levels.

The Clean Growth Strategy (which relies on 2015 figures) states that the biggest sources of emissions in the UK come from:

- business and industry (25 per cent);
- transport (24 per cent);
- power (21 per cent);
- natural resources (15 per cent);
- homes (13 per cent); and
- the public sector (2 per cent).

National GHG emission projects

- 7 Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

National GHG emission reduction projects

The UK has implemented several national GHG emission reduction projects, including the UK Net Zero Target Project by 2050. Through the Net Zero Target Project the UK aims to reduce emissions of GHGs by at least 80 per cent by 2050, compared to 1990 levels. The target was legislated in the Climate Change Act 2008, which sets carbon budgets as five-year caps on the UK's GHG emissions. A 57 per cent reduction of the UK's GHG emissions is required from 1990 to 2030. Other GHG emission reduction projects have included the climate change levy, the CRC Energy Efficiency Scheme (which was discontinued from October 2019) and a carbon price floor mechanism. The UK also has regulations in place restricting the manufacture, use, import and export of Ozone-depleting substances (ODS) such as fluorinated GHGs (F gases). ODS are regulated directly through the EU Regulation on Ozone-Depleting Substances 2009 (Regulation (EC) No. 1005/2009) and further through the Ozone-Depleting Substances Regulations 2015 (SI 2015/168), which create offences and penalties for breach of the EU Regulations.

EU Emissions Trading System

The UK participates in the EU Emissions Trading System (EU ETS), which applies to emissions from power and heat generation, certain energy-intensive industrial sectors (eg, manufacturing facilities, oil refineries and power stations) and aviation. In 2020, the target is for the emissions from these sectors to be 21 per cent lower than in 2005. Emissions from land transport, domestic premises and agriculture are currently not regulated by the EU ETS, but some of these sectors are captured in the national mechanisms discussed above. Operators of installations participating in the EU ETS must obtain a GHG emissions permit.

The EU ETS is currently in Phase III, in which the overall number of carbon emissions allowances will decline at an annual rate of 2.2 per cent from 2021 onwards, compared to 1.74 per cent currently. Decisions as to how many free allowances to allocate are made by the European Commission, not member states.

Maritime transport projects

The EU Regulation on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport (Regulation (EU) 2015/757) requires shipowners or operators to monitor, verify and report annually on carbon dioxide emissions from ships over 5,000 gross tonnage during voyages to, from and between EU ports. Ships covered by this Regulation must carry a document of compliance. The UK has imposed the following related domestic regulations that establish penalties for failure to comply: the Merchant Shipping (Monitoring,

Reporting and Verification of Carbon Dioxide Emissions) and the Port State Control (Amendment) Regulations 2017 (SI 2017/825).

In April 2018, the International Maritime Organization agreed a comprehensive strategy to reduce GHGs from international shipping. The UK participated heavily in the development of this strategy, which includes:

- a commitment to phase out GHGs from international shipping as soon as possible during this century;
- a target of at least 50 per cent reduction, and an aim for 100 per cent reduction, in total GHG emissions from shipping by 2050;
- a target of at least a 40 per cent improvement in carbon intensity of ships by 2030, pursuing efforts towards 70 per cent in 2050; and
- possible emission reduction measures, with a commitment to develop a work-plan for implementation before 2023.

This strategy is reflected in the UK government's Clean Maritime Plan announced in July 2019, which sets out a strategy to transition to zero-emissions shipping in UK waters. As part of the Clean Maritime Plan, the UK government will establish a Maritime Emissions Regulation Advisory Service in 2020, which will provide support to innovators using zero-emissions propulsion technologies by guiding them through regulatory processes.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

- 8 | Describe the main commercial aspects of the climate sector in your country, including any related government policies.

The EU Emissions Trading System applies to many large businesses and requires organisations to buy and sell emission allowances. The climate change levy applies to a wide range of businesses and creates a heavy financial incentive for businesses to become more energy efficient. These regimes have created a major commercial element to climate change regulation since their introduction.

The UK renewable energy sector has attracted substantial investment in recent years and continues to develop and mature. It is focused predominantly on renewable electricity assets. According to national statistics on the UK's renewables sector, total electricity generation from renewables from January to March 2020 was 40.8 TWh, an increase of 30 per cent from 31.5 TWh in 2019. There are various incentives for renewable energy investment, although these incentives have been cut back somewhat in recent years.

As a global financial centre, London has seen a significant increase in green finance activity to support efforts to address climate change in the past decade. The City of London Corporation launched a Green Finance Initiative in 2016 with the aim to provide public and market leadership on green finance, advocate for specific regulatory and policy proposals in this area, and promote London and the UK as a leading global centre for green financial services. As at July 2020, there were 146 green bonds listed on the London Stock Exchange. According to the Climate Bonds Initiative, over US\$5.7 billion worth of green bonds were listed on the London Stock Exchange in the first quarter of 2019 alone.

In 2015, the London Stock Exchange was the first major exchange to launch dedicated green bond segments, with admission criteria aligned with the International Capital Market Association's Green Bond Principles. The green loan market in the UK is also expanding and developing rapidly.

The Climate Change Act 2008, the Companies Act 2006 and related regulations impose carbon disclosure and reporting obligations on some organisations in their annual reports.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

- 9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

The Climate Change Act sets the main UK target of net zero GHG emissions by 2050, with medium-term targets set in the UK government's carbon budgets.

There are also various other laws and policies in the UK requiring GHG emission limitation, reduction or removal. This includes legislation regulating point-source emissions through the environmental permitting regime and laws regulating Ozone-depleting substances, such as fluorinated GHGs. The EU Emissions Trading System (EU ETS) and climate change levy create trading schemes and tax incentives that are designed to encourage GHG emission limitation and reduction. The electricity market reform scheme and related initiatives, such as the renewables obligation, require GHG emission limitation and reduction by requiring electricity providers to supply certain amounts of renewable energy, which will displace energy obtained from non-renewable sources.

The UK government published the National Policy Statement for Fossil Fuel Electricity Generating Infrastructure in July 2011. Fossil fuel power stations are also required to comply with any applicable emissions performance standard under the Energy Act 2013 and the Emissions Performance Standard Regulations 2015. These instruments require any new coal-fired power station to be equipped with carbon capture and storage technology and restrict the total amount of carbon dioxide that can be emitted from fossil fuel power stations.

GHG emission permits or approvals

- 10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

Any business operating in the UK and falling within the EU ETS, up until 31 December 2020, must hold a GHG emissions permit. In brief, permit applications must include:

- a description of the installation and site;
- the activities to be carried out including a description of the technology and materials used;
- the sources of specified emissions from the relevant activities;
- a description of planned monitoring and reporting measures;
- a description of any environmental licence issued in relation to the installation; and
- any further information that the applicant wishes the regulator to take into account.

Permits may contain conditions on monitoring and reporting requirements. Failure to comply with the requirements for GHG emissions permits may attract criminal penalties or fines, or both. There may also be civil financial penalties for excess emissions and failure to pay the required fees may lead to a permit being revoked. Penalties can apply to directors and officers of a company if they are acting as operators of a regulated facility.

In addition to greenhouse gas emissions permits, activities involving emissions to air (particularly large combustion plants and waste incineration plants) are also subject to the environmental permitting regime. This regime covers a wide range of activities that relate to emissions to land, air and water or that involve waste. The main legislation is the Environmental Permitting (England and Wales) Regulations 2016 (SI 2016/1154). These Regulations contain schedules dealing with specific permitting requirements for particular activities or sectors.

Oversight of GHG emissions

11 | How are GHG emissions monitored, reported and verified?

Participants in the EU ETS are required to monitor and report on their emissions each year and surrender enough allowances to cover their annual emissions. There are various EU regulations setting out the specifics of these requirements, as well as guidance issued by the European Commission. The operator must propose a monitoring plan when applying for a greenhouse gas emissions permit. Annual emissions reports and monitoring will then be verified independently.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

The EU Emissions Trading System (EU ETS) imposes an EU-wide cap on allowances, and the free allowances issued to participants decrease annually. Participants are required to purchase allowances to cover their emissions through auctions or the emissions trading market. The EU ETS is currently in the final stage of Phase III, in which the overall number of emissions allowances has declined by 1.74 per cent each year. The aim is to deliver an overall reduction of 21 per cent below 2005 verified emissions by December 2020.

The UK Greenhouse Gas Emissions Trading Scheme Regulations 2012 reflect the obligations set out in the EU ETS. With regard to Brexit, the UK will remain a full participant in the EU ETS during the entire transition period.

There are around 1,000 installations in the UK that take part in the EU ETS. These include: oil refineries; power stations; offshore platforms; and industries that produce iron and steel, cement and lime, paper, glass, ceramics and chemicals.

Registration

13 | Are there any GHG emission allowance registries in your country? How are they administered?

There is a central EU registry for the EU ETS administered by the European Commission. It is an online database that covers all participating countries and holds accounts for stationary installations and for aircraft operators. Based on the Brexit Withdrawal Agreement, the UK will continue to participate in the EU ETS until the end of the transition period (31 December 2020). Furthermore, on 26 March 2020, following the outbreak of covid-19, the European Commission stated that operators must continue to comply with their EU ETS 2019 obligations. In the UK, these obligations are reflected in the Greenhouse Gas Emissions Trading Scheme Regulations 2012.

Obtaining, possessing and using GHG emission allowances

14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

The EU ETS requires participants to purchase allowances. At the start of the year, installation operators are either allocated allowances or must buy allowances through an auctioning process to cover all their emissions for the coming year. There is a limited number of free allowances provided each year. Free allowances are provided to all sectors on a transitional basis, except the power sector, and carbon capture and storage installations and pipelines (these sectors became ineligible

from 2013). Free allocations are also made to installations in sectors deemed at risk of carbon leakage.

Under the EU ETS, allowances may be transferred between installation operators and other market participants in the EU ETS when, at the end of the year: (1) an operator's emissions exceeds the amount of allowances they hold (ie, they must buy additional allowances to meet their total emissions); or (2) operators have emitted fewer GHGs than the amount of allowances they hold (ie, they may sell unused allowances).

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

15 | What GHG emission trading systems or schemes are applied in your country?

The main emissions trading scheme in the UK is the EU Emissions Trading System (EU ETS). The CRC Energy Efficiency Scheme, which closed in October 2019, was the other main scheme. Under the EU ETS, businesses can trade carbon allowances directly, through intermediaries such as banks or specialist traders, using the services of a broker, or by joining one of the several exchanges that list carbon allowance products.

The UK formally left the EU on 31 January 2020 and it is now undergoing a transition period lasting from 1 February 2020 to 31 December 2020. During this transition period, the UK remains an active participant in the EU ETS. This means that UK operators must still meet their 2020 compliance obligations up to 30 April 2021, the surrender deadline for 2020 emissions. After the end of the transition period, the UK has announced that it intends to implement a domestic emissions trading scheme linked to the EU ETS. This trading scheme would constitute a carbon emissions tax containing reporting and verification requirements similar to those outlined in the EU ETS.

Trading agreements

16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

There are no UK-specific standard form agreements used for GHG emissions trading.

However, some standard form contracts exist internationally that may be used in the UK, including:

- the International Emissions Trading Association (IETA) Master Trading Agreement for Emissions Allowances (version 3);
- the International Swaps and Derivatives Association (ISDA) EU Emissions Trading Schedule (Part 6) to their Master Trading Agreement (version 4 (including options) and version 2.5 (not including options) are adapted for Phase II delivery); and
- the European Federation of Energy Traders (EFET) CO₂ Annexes to their Electricity (version 4) and their gas (version 3) trading contracts.

SECTORAL REGULATION

Energy sector

- 17 Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

The Department for Business, Energy and Industrial Strategy (BEIS) Statistical Press Release of UK Energy Statistics 2019, published in March 2020, found that overall, total energy production in 2019 was 0.5 per cent lower than in 2018. Gross natural gas production decreased by 2.2 per cent compared to 2018. BEIS notes a long-term pattern of decline in natural gas production since the peak in 2000. Crude oil production increased by 1.8 per cent in 2019 compared to 2018. In 2019, coal production was down by 16 per cent compared to 2018, and at a record low level due to a less demand for electricity generation.

BEIS statistics also show that electricity generated in 2019 was 323.7TWh, a decrease of 2.8 per cent compared to 2018 (332.9 TWh). However, the UK remained a net importer of electricity. In 2019, renewables' share of electricity generation increased to a record high of 36.9 per cent.

The UK has implemented a number of regulations stemming from both domestic and EU policies to minimise energy consumption, improve efficiency and reduce GHG emissions.

As well as various schemes, the UK has regulations in place regarding energy efficiency in buildings, products and appliances. This includes schemes for energy ratings and certificates for efficiency.

Further, the Clean Growth Strategy 2017 identifies several future measures for improving energy efficiency, including:

- consultation on improving the energy efficiency of new and existing commercial buildings;
- consultation on the minimum standards of energy efficiency for rented commercial buildings;
- determining steps for landlords and businesses to understand and disclose operational energy use;
- exploration of voluntary building standards to support improvements in the energy efficiency performance of business buildings, and how the provision of information and advice on energy efficiency to SMEs can be improved; and
- simplification of the requirements for businesses to measure and report on energy use, to help them identify where they can cut bills.

The UK government published the Green Finance Strategy: Transforming finance for a greener future (GFS) in July 2019. The GFS also identifies government measures with respect to energy efficiency, including:

- determining steps for landlords and businesses to understand and disclose operational energy use;
- consultation on setting requirements for lenders to assist households to improve the energy performance of the houses covered by a mortgage;
- consideration of ways to simplify the Green Deal framework to support funding of energy efficiency measures;
- review of how government energy efficiency data could be used to support green finance product development;
- updating the public national register for Energy Performance Certificates regularly, to support lenders to drive energy efficiency; and

- developing an Industrial Energy Transformation Fund, backed by up to £315 million of investment, to support businesses with high energy use to transition to a low-carbon future.

An interim review of the Green Finance Strategy is due at the end of 2020 and an official strategy review will be completed in 2022.

Other sectors

- 18 Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

In the transport sector, the UK has implemented a Renewable Transport Fuels Obligation (RTFO). The RTFO requires suppliers of liquid fossil fuel for use in road transport or non-road mobile machinery to supply a certain amount of sustainable biofuel. Vehicle emissions are also subject to regulation, and there are a number of 'clean air zones' in place in the UK to improve localised air pollution. Various policies and regulations have been put in place to encourage low emissions vehicles.

In the agricultural sector, there is currently a voluntary, industry-led approach to carbon emissions reduction. The CCC stated in its 2018 progress report that this has been insufficient and recommended replacing it with a stronger framework to deliver GHG abatement in the agricultural sector. As part of the legislation associated with the UK's exit from the EU, the government announced an Agriculture Bill 2019–2021. The Agriculture Bill is still going through the parliamentary approval process, and is currently at the Committee stage in the House of Commons.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

- 19 Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

The UK has an obligation to ensure that renewable energy accounts for at least 20 per cent of total energy needs by 2020, under the EU Renewable Energy Directive (2009/28/EC). This is incorporated into UK law via the Promotion of the Use of Energy from Renewable Sources Regulations 2011 (SI 2011/243). Each EU member state is also required to ensure that 10 per cent of its transport energy consumption comes from renewable sources by 2020.

The Department for Business, Energy and Industrial Strategy (BEIS) reported in 2020 that renewable electricity generation in the UK increased by 8.5 per cent between 2018 and 2019, with a renewable electricity capacity of 47.4GW at the end of 2019. BEIS announced that renewables' share of total electricity generation in the UK increased from 45.9 per cent in 2019 to 47 per cent by March 2020, up by 11.1 percentage points. Onshore and offshore wind power, together, represent the highest proportion of the UK's renewable energy capacity. Offshore wind in particular has seen significant expansion. Total offshore wind power generation increased by 53 per cent compared to 2019, to a record capacity of 13.2TWh. Solar generation decreased by 11 per cent, from 2.2 TWh in 2019 to 1.9TWh up until March 2020.

The Planning Act 2008 and National Planning Policy Framework provide a regime for developing and consenting infrastructure projects. Some large-scale renewable energy projects may be considered to be 'nationally significant infrastructure projects', in which case applications for development consent are considered under special procedures.

Those projects not falling within the statutory definition are subject to conventional Town and Country Planning Act 1990 procedures. Depending on the project, major infrastructure projects may also require licences under the Electricity Act 1989.

The UK government has a stated ambition to attract low-carbon innovation in the UK economy and invest in innovation in this area. There are several support schemes for renewables. However, government policy in this space can change rapidly. In 2015, the government announced that it will limit renewables support to technologies that have the potential to scale up and to compete in a global market without subsidy.

The schemes currently in place to support renewables include the following.

- The Renewables Obligation (RO): a scheme providing financial incentives for large-scale renewable electricity generation in England and Wales. It requires all licensed electricity suppliers to produce evidence that they have supplied customers in Great Britain with a certain amount of energy from renewable sources. This is currently being replaced by the Contracts for Difference scheme. New generation from 31 March 2017 is not able to take advantage of the RO. Projects that already receive support under the RO will continue to receive support until the end of a project's 'support lifetime' (20 years) or in 2037, when the scheme will ultimately come to an end.
- Contracts for Difference: a statutory instrument that provides for a contracting mechanism to convert the risk of a variable price for electricity into a fixed price. When the market price is below the strike price, the generator will receive a top-up payment from the counterparty. When the market price is above the strike price, the generator must pay back the difference to the counterparty.
- Feed-in-tariff (FIT) schemes: FIT schemes provide financial incentives for small-scale renewable and low-carbon electricity generation. However, the FIT scheme has been closed to new applications since 31 March 2019.
- Renewable heat incentive (RHI): this scheme incentivises renewable heat projects by making regular payments to those who install an eligible renewable heating system or inject bio methane into the gas grid. The RHI scheme applies to both domestic and non-domestic projects.
- Renewable Transport Fuel Obligation (RTFO): this scheme requires suppliers of fuels for road-transport and 'non-road mobile machinery' to ensure that a certain proportion of the fuel they supply is sustainable biofuel.

The government provides some support for microgeneration (small-scale renewables generating electricity up to and including 50kW or heat with a capacity up to 45kW thermal). As well as FIT and RHI incentives, microgeneration activities also have permitted development rights, allowing them to be carried out with deemed planning permission.

Wind energy

20 | Describe, in general terms, any regulation of wind energy.

To construct and operate a wind energy project, a variety of environmental permits are required. In the offshore context, a development consent order, a lease of the seabed from the Crown estate and a marine licence are required. In the onshore context, planning permission must be obtained under the Planning Act 2008 or the Town and Country Planning Act 1990, depending on the size of the proposed development. Land use and access rights will also need to be secured. Larger projects are likely to require an environmental impact assessment. Enhanced community engagement requirements exist for larger developments under the Localism Act 2011.

There are government-led support schemes for wind generation, although these schemes are frequently subject to change as the government develops its energy policy. For instance, the exemption for renewable energy projects under the climate change levy became unavailable from 1 August 2015.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

Solar energy has grown rapidly in the UK's energy mix. In 2017, the UK's first subsidy-free solar photovoltaic farm was opened in Bedfordshire. By 2018, solar photovoltaics accounted for 29.6 per cent of the UK's total renewable energy capacity.

Large-scale solar projects must obtain planning permission and any other necessary environmental permits. Developers must also secure land use and access rights for the substantial land area usually required for large-scale solar farms. Planning permission is commonly granted for a period of 25 years, with requirements for decommissioning and site restoration included as planning conditions.

Small-scale solar installations may be able to benefit from the support provided for microgeneration. However, the government closed the FIT scheme to new applications on 31 March 2019.

By March 2020, generation from solar photovoltaics decreased by 11 per cent compared to 2019. However, this was also owing to a decrease in the number of sunlight hours compared to the relatively high level seen in 2019, with a fall from 3.4 to 3.2 hours per day on average.

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

Most hydropower generation activity in the UK occurs in Scotland. There is limited scope for developing new hydropower installations. However, small-scale hydropower has some growth potential. As with wind and solar facilities, hydropower projects require planning permission and environmental permits, particularly with respect to water abstraction and discharges. Flood risk assessment and related permissions may also be required.

In 2018, the European Commission published guidance on the impact of EU habitat and species protection legislation and policy on hydropower projects. The guide emphasises the need to consider biodiversity and ecology issues at an early stage of a project planning process. It also provides examples of best practice and mitigation measures.

There is significant potential for wave or tidal energy in the UK. However, the industry is still in its infancy. There is no specialist regulation in place for this industry, but more general laws addressing marine permitting, marine protected areas and other environmental permits would be required to undertake activities associated with wave or tidal energy generation.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

There are several Energy from Waste (EfW) plants in the UK. Landfill diversion targets have become increasingly pressing, driven by the EU Landfill Directive (Directive 99/31/EC) and EU Waste Framework Directive (Directive 2008/98/EC), which in turn has driven the development of EfW facilities across the UK. EfW processes still generate GHG emissions but overall are considered preferable to disposal of waste by landfill, as heat energy or electricity is recovered in the process. The Department for Environment, Food and Rural Affairs published 'Energy

from waste: a guide to the debate', which highlights the key environmental, technical and economic issues at play.

EfW activities require environmental permits, planning permission, Electricity Act licences and will also be subject to laws regulating emissions to air.

The UK government provides opportunities for financial support for community heating programmes, which can be fulfilled through EfW processes. EfW projects providing heat may also be able to benefit from the RHI.

Biofuels and biomass

- 24 Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

Biofuels

Under the EU Renewable Energy Directive, 10 per cent of the UK's transport energy consumption must come from renewable sources by the end of 2020. The UK also has obligations to reduce life-cycle GHG emissions from transport fuel under the EU Fuel Quality Directive (Directive 2009/28/EC).

The RTFO is the primary way that the government incentivises and supports biofuels in transport, requiring fuel suppliers to provide a certain proportion of biofuels alongside fossil fuels. In April 2018, the government announced changes to the RTFO, increasing the proportion of biofuel required. Under these new requirements, owners of transport fuel who supply at least 450,000 litres a year or more must make sure the mix is at least 9.75 per cent biofuel in 2020 and 12.4 per cent biofuel by 2032. The RTFO applies to refiners, importers and any other suppliers of fossil-based road transport fuel (hydrocarbon oil) in the UK.

Biomass

Biomass generation is regulated in a similar way to other industrial emissions installations. In addition, all bioliquids and stations equal to or larger than 1MW that use solid biomass or biogas fuels must meet sustainability reporting requirements relating to the land from which the biomass is sourced and the life-cycle GHG emissions of the biomass.

The government launched an initiative to promote heat energy investment – the Heat Network Investment Project – in December 2018. This follows a successful pilot initiative in 2016 and 2017 in which local authority-led heat network projects received £24 million to provide heat to 5,000 domestic customers and 50 non-domestic buildings. Several of these projects involved biomass boilers.

In March 2020, BEIS released updated energy statistics, showing that the generation of bioenergy sources reached a record of 36.6 TWh, up 5.2 per cent when compared to 2019. BEIS has stated that bioenergy generation was boosted as a result of the opening of Lynemouth power station as a biomass fuelled facility in late 2018.

Carbon capture and storage

- 25 Describe, in general terms, any policy on and regulation of carbon capture and storage.

The UK government has affirmed its commitment to supporting carbon capture, usage and storage (CCUS), with the aim of being able to deploy CCUS at scale during the 2030s. This includes establishing the CCUS Cost Challenge Taskforce to advise on steps to reduce the cost of deploying CCUS in the UK. BEIS has committed to spend up to £100 million to support industry and CCUS innovation and deployment in the UK.

However, the BEIS House of Commons select committee launched an inquiry into the government's plans for CCUS policy in May 2018. In particular, the inquiry investigated how essential CCUS is for the UK to meet its emission reduction target for 2050, how the government should

set targets for cost reduction in CCUS, what a realistic level of cost reduction might look like and what alternatives the government might consider if CCUS costs do not come down 'sufficiently'. The inquiry report was published on 25 April 2019, entitled 'Carbon capture usage and storage: third time lucky?'. The government's response was given on 20 September 2019 in the 'Twenty-first Special Report of Session 2017-19'. This report lists a number of government responses to each of the recommendations published in the BEIS April 2019 report.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

- 26 What are the main climate matters and regulations to consider in M&A transactions and other transactions?

Climate matters can arise in corporate transactions in a variety of ways. Buyers and lenders should be aware of and understand aspects of the target's business affected by climate change policy or legislation.

Through the due diligence process, a buyer or lender will need to consider whether the target is subject to any emissions schemes such as the EU Emissions Trading System or required to comply with other climate change related legislation. If the target business requires permits for carbon emissions or more general planning and environmental permits, these details should be investigated, as should permit compliance. If the target business is required to participate in an emissions trading scheme then details of the target's emissions, the allowances it holds, and projected emissions should also be considered.

Government support schemes may also be relevant to the target business. However, this policy landscape can also change quickly. Climate policy changes may affect things like the target's valuation. This uncertainty may mean that parties require specific warranties and indemnities in transaction documents, clawbacks against the purchase price, or arrangements such as protective exit structures.

Green finance has grown substantially in the past decade, and the role for finance in tackling climate change is undisputed. Significant investment is required to fund the transition to a low-carbon economy required to meet the targets set under international climate agreements. 'Green' labelled or certified financial instruments are also an increasingly attractive way to fund projects or activities related to climate change or renewables and are popular with many investors and lenders. Initiatives such as the Sustainability Linked Loan Principles, the Green Bond Principles and Green Loan Principles indicate that the sophistication and maturity in this market will continue to rise.

UPDATE AND TRENDS

Emerging trends

- 27 Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

Following Brexit, the UK will need to ensure that it meets its international climate change commitments independently of the EU and it will also be able to diverge from the EU laws relating to the EU Emissions Trading System, renewables, and energy efficiency after the end of the transition period on 31 December 2020.

The current EU Withdrawal Act details procedures for the retention of EU law in the UK until the end of the transition period. The general approach of the EU Withdrawal Act is to retain the EU laws applicable in the UK until 30 December 2020, with powers granted to the UK Parliament to have scrutiny and oversight over this process. The approach to withdraw from the EU and its effect on the laws applicable in the UK will also be influenced by the outcome of political negotiations between the UK government and the European Commission.

Climate change and carbon trading are covered in the text of a proposed Agreement on Energy (UK Draft Agreement), published by the UK government in May 2020. The UK Draft Agreement followed the release in March 2020 of the EU's draft text of an EU-UK agreement (EU Draft Agreement), containing provisions on the energy sector.

At the time of writing, the UK future alignment with EU climate change mechanisms remains subject to negotiations. The EU and UK proposed agreements on energy are not fully aligned – the key area of difference concerns energy trading. Following the end of the transition period, the UK is expected to develop a new UK emissions trading scheme, which is due to be introduced in 2021.

Coronavirus

28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

Government restrictions during the covid-19 pandemic have altered the patterns of energy demand in the UK and carbon emissions have fallen by more than one-third during the period of mandatory closure of certain business and operating locations (lockdown).

Considering covid-19 and the 2019 UK commitment to reaching net zero GHG emissions by 2050, the UK government is working towards a green economic recovery from the pandemic. This also reflects the ambitions of the country to progress rapidly in its climate commitments, to prepare for the 26th UN Climate Change Conference (COP26). COP26 was originally due to be held in November 2020 but was postponed following the covid-19 outbreak and is now planned to be held in Glasgow in November 2021.

Programmes and initiatives

The UK is actively addressing the ways in which the pandemic may impact the country's commitments to fight climate change. The Committee on Climate Change (CCC) published its annual report in June 2020 (the CCC Report) and submitted it to Parliament, advising the government on how to deliver an economic recovery in line with the net zero targets. In particular, the CCC sets out recommendations for all key government departments, from page 24 of the report onwards, on how to initiate a green and resilient covid-19 recovery.

The CCC Report proposes two new key policy tools for UK government departments:

- public money must not support industrial sectors that cannot contribute to a net zero economy; and
- carbon taxation should be developed to bring behavioural changes in businesses.

The CCC Report also highlights five investment priorities for the UK government to consider in the five months ahead:

- investments in low-carbon retrofits and buildings;
- investments in tree planting, peatland restoration, and green infrastructure;
- investments in energy networks;
- investments in infrastructure, which makes it easier for people to walk, cycle and work remotely; and
- investments to move towards a circular economy.

In June 2020, the Department for Business, Energy and Industrial Strategy (BEIS) reported on a speech given by Alok Sharma, Business Secretary and COP26 President, at a London Stock Exchange webinar in relation to covid-19 and the climate change emergency. The Business

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Secretary called upon the importance of ensuring a green recovery from the covid-19 crisis, together with the business and finance sectors, in line with the UK commitments to net zero GHG emissions. He set out the ways in which BEIS is leading work in support of a green recovery, which will include:

- supporting the offshore wind industry to reach 40GW by 2030;
- building the first fully deployed carbon capture storage cluster by the mid-2020s;
- supporting energy industries in moving to low-carbon techniques;
- helping to improve the energy-efficiency of homes, schools and hospitals; and
- delivering 2 million new jobs in clean growth in the next 20 years.

All the efforts listed above would be in line with the Green Finance Strategy developed by the UK in July 2019.

From August 2020, BEIS proposes to launch a first round of the UK Partnering for Accelerated Climate Transitions (UK PACT) Green Recovery Challenge Fund, a £12 million fund, which UK and international organisations will be able to use to support countries in Africa, Asia and South America to develop green industries and a green recovery. The UK PACT is part of a £60 million programme under the International Climate Finance (ICF) portfolio. It forms part of the overall £5.8 billion commitment made by the UK government to ICF to tackle climate change between 2018 and 2022.

Regulations amendments

Covid-19 has impacted the developments of the 2020–2021 Environment Bill. The Bill was introduced in Parliament on 15 October 2019 and reintroduced, following a general election, on 30 January 2020. The Bill sets out the legislative framework to guide the government's commitment in improving the natural environment in the UK.

The Bill is currently under review at the Committee stage in the House of Commons. However, owing to the impact of covid-19, the Public Bill Committee has been suspended and is now scheduled to report on any amendments to the Bill by Tuesday, 29 September 2020.

Covid-19 has had less of an impact on the developments of the Agriculture Bill 2019–2021, which seeks to provide a legislative framework to replace the current EU Common Agricultural Policy (CAP), which will stop applying in the UK at the end of the transition period. The Bill was given its First Reading in January 2020 and its Second Reading in February 2020. It is currently at the Committee stage in the House of

Lords. A line-by-line examination of the Bill took place during the third day of the Committee stage on 14 July 2020 and the Committee stage continued on 16 July 2020 with further amendments to be discussed.

Despite the timely developments of the Agriculture Bill, concerns and criticisms are being raised as the Bill does provide for extensive measures in relation to food security. As covid-19 has exposed the fragility of the UK food system, the Agriculture Bill will be an essential piece of legislation to guide food security and environmental concerns in the post-Brexit and post-covid-19 phases.

Best practices for clients

Despite the challenges presented by covid-19, businesses and financial institutions should continue focusing on their long-term sustainability commitments. As confirmed by the CCC Report, which was promoted to the UK government, recovery from the covid-19 economic crisis will coincide with a pivotal time in the fight against climate change.

According to statistics released in June 2020 by the international non-profit The Climate Group, 97 per cent of business professionals have confirmed that their sustainability strategy has remained unchanged during the pandemic. However, 47 per cent of businesses confirmed that they will need more support from the government to continue meeting their original sustainability targets.

United States

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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

1 | Do any international agreements or regulations on climate matters apply in your country?

On 31 March 2015, the United States announced its commitment to reduce greenhouse gas (GHG) emissions to 26 per cent to 28 per cent below 2005 levels by 2025 as the basis for its 'Intended Nationally Determined Contribution' at the United Nations (UN) Climate Change Conference. In April 2016, the US signed the Paris Agreement under the United Nations Framework Convention on Climate Change, and later ratified it, committing, alongside nearly 200 other countries, to limit global warming to 1.5°C above pre-industrial levels. However, in June 2017, President Trump announced that the US would pull out of the Agreement. Following that announcement, several US states formed a group called the US Climate Alliance, now with 24 member states and Puerto Rico, committed to upholding the objectives of the Paris Agreement despite federal withdrawal. State, municipal, academic, and corporate actors have also committed to meeting the Agreement's goals regardless of federal involvement, through organisations such as America's Pledge and We Are Still In. Withdrawal from the Agreement is a four-year process, with the US's expected withdrawal date to be 4 November 2020 – the day after the US presidential election. Should President Trump win the election on 3 November, he has announced his intent to either renegotiate the US commitment in the Agreement or propose a new accord entirely. Should President Trump lose the election, his successor could re-enter the agreement using executive authority immediately upon taking office in January 2021, to take effect 30 days later.

On 11 November 2014, the US struck a bilateral agreement with China under which both nations will seek to significantly reduce GHG emissions. Under the agreement, the US pledged to reduce emissions to 26 per cent to 28 per cent below 2005 levels by 2025. Similarly, In June 2016, the US, Mexico, and Canada announced a joint goal of achieving 50 per cent 'clean power' generation across all three countries and reducing methane emissions from the oil and gas sector by 40 per cent to 45 per cent by 2025. While both of these agreements remain in effect, the Trump administration has not taken significant action to implement the renewable energy goal and has recently proposed to roll back rules governing methane emissions from the oil and gas sector, making it less likely that the US will attain its commitments.

The US also is a party to the Vienna Convention for the Protection of the Ozone Layer and a protocol to that treaty, the Montreal Protocol on Substances that Deplete the Ozone Layer, since its finalisation in 1987. Under the Montreal Protocol and Title VI of the US Clean Air Act (CAA), some ozone-depleting substances (ODS) like chlorofluorocarbons have now been phased out except for a small quantity for uses agreed upon as 'essential'. Hydrochlorofluorocarbons are currently

being phased down through incremental decreases in consumption and production, with a complete phase-out by 2030. On 15 October 2016, at the 28th Meeting of the Parties in Kigali, the parties agreed to amend the Montreal Protocol to expand its scope to include certain hydrofluorocarbons (HFCs), though the US has not yet ratified the agreement.

In recent years, the Environmental Protection Agency (EPA) began to regulate HFCs through two CAA Title VI programmes: the refrigerant management programme under section 608 of the CAA and the Significant New Alternatives Policy (SNAP) programme under section 612 of the CAA. The refrigerant management programme was extended to HFCs pursuant to a 2016 rule by EPA. However, the agency finalised a rule in February 2020 rolling back the applicability of certain leak repair requirements to HFCs, while keeping in place other requirements for HFCs related to appliance disposal and technician certification requirements. That rule was challenged by environmental groups in May 2020.

Regarding the SNAP programme, EPA issued SNAP Rule 20 in 2015 prohibiting certain HFCs and HFC-blends in various end-uses in four industrial sectors. That rule was challenged, and the DC Circuit issued an opinion in August 2017 vacating part of the rule to the extent it required manufacturers to replace HFCs with a different substance. EPA announced in April 2018 that it was suspending application of the HFC-related portion of SNAP Rule 20 in its entirety pending a rule-making process to address the remand of the rule. However, that EPA action was challenged by environmental groups and several states, and was struck down by the DC Circuit in April 2020. Consequently, the HFC restrictions under the SNAP rule apply only to entities that had not yet replaced ODS with HFCs in 2015, but are not applicable to entities that had already replaced ODS with HFCs by that time – a result that presents significant challenges for agency enforcement. The DC Circuit also struck down a second SNAP rule regulating HFCs in April 2019 after determining it was bound by its previous decision, resulting in the same outcome for those restrictions. Several states have promulgated replacement regulations in light of this, with California leading the charge to replace the SNAP rules and impose even more stringent requirements. Because of the problems posed by this patchwork of state regulation, legislation was introduced in both houses of Congress in late 2019 and early 2020 with bipartisan support to address this issue at the federal level. However, these bills eventually stalled owing to, among other things, the failure of the proposed legislation to pre-empt state regulation.

International regulations and national regulatory policies

2 | How are the regulatory policies of your country affected by international regulations on climate matters?

The US lacks a comprehensive policy to regulate GHG emissions at the national level. Individual US states and federal regulatory agencies have taken numerous sector-based actions and often look to international standards when designing domestic programmes. For example, EPA

has historically cited GHG emissions data and climate change research created by the UN's Intergovernmental Panel on Climate Change. Similarly, EPA and the Federal Aviation Administration (FAA) traditionally have worked with the International Civil Aviation Organization (ICAO) to establish aircraft emissions standards. EPA has pledged to participate in the Carbon Offsetting and Reductions Scheme for International Aviation, and recently unveiled proposed CAA emission standards with domestic limits that mirror the ICAO's standards. EPA explained that mirroring the ICAO standards domestically would bring 'substantial benefits for future international cooperation' on aircraft emissions, which the agency deemed 'key for achieving worldwide emission reductions'.

Main national regulatory policies

3 | Outline recent government policy on climate matters.

In the absence of legislation, federal agencies have historically enacted climate policy under pre-existing regulatory authority, primarily by promulgating regulations under the CAA. The Trump administration has sought to rescind or modify many prior federal regulatory actions, including the Clean Power Plan (CPP), vehicle standards for cars and light trucks, carbon accounting rules, volatile organic compounds and methane emissions standards, and the waiver allowing California to set more stringent mobile source standards. The centrepiece of these federal initiatives was the CPP and the Trump administration replacement rule, the Affordable Clean Energy Rule (the ACE Rule). States and other groups have challenged many of these actions, including the ACE Rule, in litigation. The Trump administration is also taking steps to rescind or modify other GHG programmes, including those related to mining, the power sector, fossil fuel extraction on federal lands, federal permitting and energy efficiency.

Main national legislation

4 | Identify the main national laws and regulations on climate matters.

The US lacks any significant national climate change legislation, although certain GHG emissions are subject to regulation under the CAA.

National regulatory authorities

5 | Identify the national regulatory authorities responsible for climate regulation and its implementation and administration. Outline their areas of competence.

EPA is the primary national regulatory authority with responsibility for climate regulation. EPA's authority includes promulgation and enforcement of CAA standards for GHG emissions for both mobile and stationary sources, GHG reporting programmes, adaptation to a changing climate, and protection of drinking water aquifers under the federal Safe Drinking Water Act with respect to underground injection of CO₂ and other materials.

The Council on Environmental Quality (CEQ) is charged with ensuring federal agencies comply with the National Environmental Policy Act (NEPA) in assessing potential environmental impacts of major federal actions. Consideration of climate change impacts in NEPA analyses continues to be primarily guided by court decisions on agency rule-making processes, land use planning documents, leasing decisions, and individual project permitting decisions, most often in the energy or transportation contexts. These litigation outcomes have not been uniform, but generally trend toward requiring greater consideration of GHG emission impacts, including downstream effects further removed from the immediate federal action. On 26 June 2019, CEQ announced draft guidance to address how agencies should consider GHG emissions in the NEPA process. In July 2020, CEQ amended the

nearly 40-year-old regulations implementing NEPA applicable across the federal government. Those regulations are now being challenged in litigation, including allegations that CEQ limited the scope of cumulative impacts analysis including climate change.

GENERAL NATIONAL CLIMATE MATTERS

National emissions and limits

6 | What are the main sources of emissions of greenhouse gases (GHG) (or other regulated emissions) in your country and the quantities of emissions from those sources? Describe any limitation or reduction obligations. Do they apply to private parties in your country?

The most recent comprehensive GHG emissions data for the US is the Environmental Protection Agency's (EPA) 2020 'Inventory of US Greenhouse Gas Emissions and Sinks', which covers the period from 1990 to 2018. Mandatory GHG reporting began in 2011 for certain industries and in 2012 for others. As a result, EPA's 2020 report includes robust GHG emissions data from various sectors of the US economy. The main sources of GHG emissions include the electricity generation, transportation, industrial, residential and commercial sectors. GHG emissions standards apply to private commercial entities to the extent that the entity is subject to regulation by the relevant national or state authority.

National GHG emission projects

7 | Describe any major GHG emission reduction projects implemented or to be implemented in your country. Describe any similar projects in other countries involving the participation of government authorities or private parties from your country.

At the federal level, GHG emission reductions are primarily driven by US Clean Air Act regulation, which does not currently contemplate emissions reduction projects or carbon offsets as compliance mechanisms.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

8 | Describe the main commercial aspects of the climate sector in your country, including any related government policies.

Commercial climate business in the US is fragmented, largely owing to the lack of comprehensive national climate change regulation. Carbon offset project development is accelerating, and the generation of offset credits has increased significantly as entities seek offsets for use in compliance with California's cap-and-trade programme and to fulfil voluntary GHG reduction commitments.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

9 | Do any obligations for GHG emission limitation, reduction or removal apply to your country and private parties in your country? If so, describe the main obligations.

Various national, regional and state programmes exist in the US to regulate GHG emissions. The main programmes are regulations issued under the US Clean Air Act (CAA), federal motor vehicle fuel economy standards, California's cap-and-trade programme and the Regional Greenhouse Gas Initiative.

GHG emission permits or approvals

10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

Certain stationary sources are required to obtain CAA Title V operating permits and prevention of significant deterioration (PSD) permits for GHG emissions. Under the CAA's 'cooperative federalism' approach, most states manage GHG permitting in conjunction with any applicable state laws or programmes. Typically, any applicable New Source Performance Standards GHG emissions limits will be incorporated into a facility's Title V operating permit. When obtaining permits under the PSD programme, sources must evaluate available emissions reductions options to determine the 'best available control technology' for that facility, which are made on a case-by-case basis considering energy, environmental and economic impacts, and other costs. Over time, technological advancements increase the degree of attainable emissions reductions.

Oversight of GHG emissions

11 | How are GHG emissions monitored, reported and verified?

EPA's mandatory GHG Reporting Rule requires reporting of GHG data and other relevant information for facilities in 41 source categories. EPA compiles reported GHG emissions to create its annual GHG inventory for the US. Compliance for covered sources is mandatory and administrative, civil or criminal penalties may apply for violations. Several states also have implemented GHG reporting rules, and the reporting thresholds differ by state. Entities must comply with both federal and state GHG reporting requirements, if applicable.

In 2010, the Securities and Exchange Commission (SEC) issued interpretive guidance regarding required disclosures by companies of their climate change related risks. Although the 'materiality' standard still provides the threshold for required disclosures in the US, the SEC issued a general request for comments regarding whether changes are needed to its disclosure rules. The SEC is reviewing comments and although major changes to the reporting requirements are not likely in the near term, many believe those changes will eventually come. In the absence of federal action on climate change risk reporting, states, environmental groups, investors and shareholders are increasingly driving changes to climate risk reporting by companies. Companies are increasingly facing dozens or even hundreds of requests for data and information on how they assess and disclose climate-related risks. Although voluntary, some predict that such standards are likely to become mandatory, albeit this is not likely to occur in the US in the current administration.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

There is no GHG allowance regime at the federal level. The Regional GHG Initiative (RGGI) and California operate cap-and-trade programmes with associated emissions allowance regimes.

RGGI, the first market-based GHG reduction scheme in the US, currently encompasses the eastern states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont and Virginia. RGGI lowered its GHG emissions cap beginning in 2014 to 91 million short tons, with annual follow-on decreases of 2.5 per cent from 2015 to 2020. In August 2017, RGGI members approved measures to extend RGGI to 2030, with

a further 30 per cent reduction in GHG emissions during that time. Membership in RGGI is voluntary and subject to change; New Jersey withdrew from RGGI in 2011 but rejoined in 2019. Virginia joined RGGI in 2020, and Pennsylvania is considering joining the programme.

RGGI is limited to the power sector and uses an allowance system for compliance; electric power generators subject to RGGI are required to hold CO₂ allowances equal to the amount of CO₂ they emit in a given compliance year. Each RGGI state issues allowances in an amount defined by each state's applicable law or regulation implementing RGGI. Collectively, these allowances comprise the annual RGGI cap, which are distributed through quarterly auctions. RGGI also utilises a cost containment reserve system to allocate and auction additional allowances when needed to limit price volatility that, combined with periodic over-supply, has kept prices low but also has frustrated efforts to create a market for carbon offsets in RGGI states. A new an Emissions Containment Reserve, which allows states to withhold allowances from auction if reduction costs are lower than projected, will allow more dynamic response to market conditions and may have the effect of stabilising or raising slightly the cost of RGGI allowances.

California's Global Warming Solutions Act (AB 32), signed into law on 27 September 2006, established a mandate to reduce GHG emissions to 1990 levels by 2020 and granted broad authority to the California Air Resources Board (CARB) to develop and implement a broad strategy to achieve that goal. In September 2016, a new bill (SB 32) extended and expanded the state's commitment to reducing GHG emissions, establishing a new reduction target of 40 per cent below 1990 levels by 2030. CARB's strategy to achieve these emission reduction goals is set forth in its Scoping Plan and includes programmes in nearly every sector of the economy. CARB's 2017 updated Scoping Plan seeks a 2030 target of 260MMtCO₂e, and envisions an 80 per cent reduction in GHG emission by 2050. The central feature is a multi-sector cap-and-trade GHG emissions programme, first implemented in 2013. The programme governs 80 per cent of GHG emissions in the state, and is one of the largest carbon markets in the world. In July 2017, CARB established a 'price ceiling' and limits the use of out-of-state offsets. Starting in 2021, only 4 per cent of a covered entity's compliance obligations can be met with offset credits, and that same year, CARB will start implementing a price ceiling of US\$65 per allowance. On top of these mandates, the Clean Energy and Pollution Reduction Act of 2015 establishes state-wide goals in California for 2030 of 50 per cent electricity generation from renewable resources and doubling energy efficiency in electricity and natural gas usage.

CARB sets an annual cap on GHGs and issues a limited number of emission allowances, each of which authorises its holder to emit one MtCO₂e. The number of available allowances is limited by the cap, and declines by approximately 3 per cent each year. Entities that emit 25,000MtCO₂e annually are obliged to surrender a certain number of compliance instruments to CARB, consistent with each entity's reported emissions. Compliance instruments consist primarily of allowances, which can be purchased from CARB at quarterly auctions. In addition, up to 8 per cent of a covered entity's obligation can be met with CARB-certified offsets, but starting in 2021 this number will drop down to 4 per cent, then increase to 6 per cent in 2026. Both allowances and offsets also may be bought and sold on the secondary market, subject to certain restrictions. Covered entities are required to disclose substantial information to CARB, including information about corporate ownership and affiliates, directors and officers, high-level employees, and legal and market-strategy advisers.

In 2019, the US Department of Justice (DOJ) filed a lawsuit in federal court in California challenging the constitutionality of linking California's cap-and-trade programme to a similar programme operated by Quebec. The DOJ alleged that California's actions to link its cap-and-trade programme to Quebec's programme violated the US

Constitution's Treaty Clause, Interstate Compact Clause, Foreign Affairs Doctrine and Foreign Commerce Clause. In two separate opinions, dated 12 March 2020 and 17 July 2020, the court ruled in favour of California on all claims, affirming the constitutionality of California's linkage with Quebec and ending the case at the trial court level. It is yet to be seen whether DOJ will appeal.

Registration

- 13 | Are there any GHG emission allowance registries in your country? How are they administered?

There is no GHG allowance regime at the federal level. The registry for RGGI allowances is called the 'CO₂ Allowance Tracking System'. Each RGGI allowance has a unique serial number, which then tracks initial ownership, transfer, and retirement of allowances. California and other linked jurisdictions utilise the Compliance Instrument Tracking System Service as an allowance registry, which tracks the issuance, initial ownership, transfer, and retirement of allowances and offsets.

Obtaining, possessing and using GHG emission allowances

- 14 | What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

There is no GHG allowance regime at the federal level.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading

- 15 | What GHG emission trading systems or schemes are applied in your country?

There is no national GHG allowance regime or national-level emission trading system. Any qualified party can participate in RGGI allowance auctions; auction rules limit the number of allowances that associated entities may purchase in a single auction to 25 per cent of the total allowances offered for auction. RGGI allowances also are traded on a secondary market, along with associated futures and options contracts. California conducts quarterly auctions of GHG emission allowances. Both entities that are covered by California's cap-and-trade programme, and others opting into the programme, can participate in the auctions.

Trading agreements

- 16 | Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

In October 2013, the International Emissions Trading Association released a trade agreement template for California allowances and offsets. Its provisions address offset invalidation, holding limits and buyer liability provisions.

SECTORAL REGULATION

Energy sector

- 17 | Give details of (non-renewable) energy production and consumption in your country. Describe any regulations on GHG emissions. Describe any obligations on the state and private persons for minimising energy consumption and improving energy efficiency. Describe the main features of any scheme for registration of energy savings and for trade of related accounting units or credits.

In 2019, the US produced 6,227,281,000 barrels and consumed 7,469,280,000 barrels of crude oil and petroleum products. In 2019, there were 40.7 trillion cubic feet of gross withdrawals of natural gas in the US and the US consumed 31.01 trillion cubic feet of natural gas. In 2017, the US produced 756,200,000 short tons of coal and consumed 688,100,000 short tons of coal. In 2019, the US produced 200,000 pounds of uranium concentrate and nuclear power plants generated 809.4 billion kilowatt-hours of electricity. According to EPA's 2019 report, total US GHG emissions were 6,676.6MMtCO₂e in 2018, representing an increase of about 3 per cent from 2017 levels.

The Trump administration has taken a series of steps aimed at slowing down or stopping the implementation of more stringent product efficiency standards, including taking the position that a congressionally imposed backstop standard for general service lamps would not take effect in January 2020 (and that state standards are pre-empted) and promulgating changes to its standard development and implementation process that would make it easier for the Department to decline to periodically strengthen product standards, prompting a number of legal challenges. The Ninth Circuit ordered the Department of Energy (DOE) to publish a number of efficiency standards that had been finalised during the Obama administration, but that had not been published in the Federal Register prior to President Trump taking office. States and NGOs have also brought suits to challenge the DOE's 'Process Rule' and to force it to update efficiency standards where it has failed to meet statutory deadlines to do so.

While the Trump administration's initial proposed budget called for the elimination of or transfer to a non-governmental organisation of the Energy Star Program, Congress rejected that approach and the programme remains active. The DOE runs the Federal Energy Management Program, which focuses on reducing energy consumption and increasing the proportion of renewable energy utilised at federal agencies. The DOE also runs a 'Better Buildings' programme, with a goal of increasing building energy efficiency by 20 per cent over the next decade across the commercial, public, industrial and residential sectors. Through these and other programmes, the federal government continues to create limited incentives and provides some support for energy efficiency and related technologies.

However, many US states also pursuing energy efficiency strategies. California, Vermont, Hawaii, Nevada, Colorado, Washington and Oregon continue to expand their appliance efficiency programmes, enacting standards for product categories where the DOE has not yet been active. Twenty-eight states have enacted Energy Efficiency Resource Standards (EERS) or other binding energy savings targets. Several other states have non-binding programmes, or aspirational programmes with very low efficiency targets. State programmes take a variety of approaches, but often mandate or incentivise demand-side energy efficiency programmes run by state and local electric utility companies. EERS vary widely, but generally target incremental energy efficiency gains of 0.5 per cent to 2.5 per cent annually. EERS and other similar programmes are driving significant investment in energy efficiency technologies, software and services in many US states. There is no standard methodology for registering and trading

instruments based on energy efficiency, and each state takes a different approach in tracking and assuring compliance, typically at the utility level.

Other sectors

18 Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

In 2009, EPA determined that the six primary GHGs recognised by the UN reasonably may be anticipated to endanger public health and welfare. Concurrently, EPA determined that GHG emissions from motor vehicles contribute to pollution that endangers public health and welfare. In September 2011, in coordination with the National Highway Traffic Safety Administration (NHTSA), EPA established fuel economy standards for light-duty cars and trucks as well as the first phase for medium and heavy-duty trucks. However, in March 2017, EPA announced its intention to reconsider this determination coordinated with a parallel rule-making process to be undertaken by the NHTSA regarding Corporate Average Fuel Economy (CAFE) standards for cars and light trucks for model year 2022 to 2025. In 2018, the Trump administration released a draft proposal that would have frozen CAFE standards at 2020 levels through to 2026. In September 2019, EPA formally revoked California's unique ability to set stricter vehicle emissions standards, which are followed by about a dozen other states. On 31 March 2020, EPA and the NHTSA finalised rules governing CAFE standards for vehicle model years 2021–2026, and that increase fuel economy by 1.5 per cent annually. Prior rules would have resulted in fuel economy of 54.5mpg by model year 2025, while the new rules set the standard at 40.4mpg, representing a significant weakening of prior federal fuel economy standards.

On 15 August 2016, EPA promulgated an endangerment finding under section 231(a)(2)(A) of the CAA for aircraft, which determined that GHG emissions from certain classes of aircraft engines, including those used by most large commercial aircraft, contribute to the air pollution that causes climate change and endangers public health and welfare. According to EPA, GHG emissions from aircraft represent 12 per cent of transport-related GHG emissions in the US, and 3 per cent of total US GHG emissions. In March 2019, the FAA announced its Monitoring, Reporting, and Verification Program for the Carbon Offsetting and Reductions Scheme for International Aviation (CORSIA). Applying to US air carriers and commercial and general aviation operators, the FAA's programme consists of voluntary carbon emissions reporting to establish standardised practices to implement CORSIA. On 22 July 2020, EPA unveiled its proposal for the first-ever emission standards for GHGs emitted by aircraft. If finalised, the standards would apply to manufacturers of new aircraft and new aircraft engines, with compliance determined as part of the Federal Aviation Administration's airworthiness certification process. The proposed standards rely largely on fuel efficiency, and draw heavily from the 2017 Airplane CO₂ Emission Standards established by the United Nations' International Civil Aviation Organization.

When GHGs became a 'regulated pollutant' under the CAA, EPA undertook various rule-making processes to incorporate GHG emissions into programmes applicable to stationary sources, which include the Title V operating permit programme and the Prevention of Significant Deterioration programme as well as New Source Performance Standards for both existing and new electric generating units. The Clean Power Plan was released in 2015, but on 21 August 2018, EPA proposed to replace the Clean Power Plan with the Affordable Clean Energy Rule (the ACE Rule), which EPA finalised on 9 June 2020. As part of the ACE Rule, EPA significantly shifted its interpretation of its regulatory authority under CAA section 111(d). The ACE Rule only regulates fossil fuel-fired electric steam generating units by imposing modest efficiency requirements; it does not contain standards applicable to natural gas or

integrated gasification combined cycle turbines. Numerous states and NGOs have sued to block the rule. If the validity of the ACE Rule is ultimately affirmed in court, it will require minimal GHG reductions at some power plants, largely in the form of efficiency upgrades.

In 2012, EPA promulgated standards that regulate volatile organic compound emissions from gas wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels and leaking components at natural gas processing plants, and sulphur dioxide emissions from natural gas processing plants. EPA revised these standards in 2013, 2014 and early 2015. EPA also enacted revisions to the National Emission Standards for Hazardous Air Pollutants for Oil and Natural Gas Production Facilities. While not directly regulating GHGs, EPA predicted that these regulations would result in significant climate co-benefits owing to anticipated methane reductions. In 2016, EPA issued new standards specific to methane emissions from new and modified oil and gas wells and related facilities. In August 2020, EPA rescinded those standards in lieu of an approach focused on volatile organic compound emissions. Litigation is likely. In addition, the Bureau of Land Management (BLM), within the Department of the Interior, issued new regulations in 2016 to limit venting or flaring of gas from wells on federal or Indian lands, under the auspices of reducing 'waste' under the Mineral Leasing Act of 1920. In 2018, the BLM issued a final rule rescinding most of those standards, but a federal court struck down that rescission in July 2020. Both BLM rules remain in litigation.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

19 Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

The US does not have a comprehensive national policy on renewable energy production or use. Instead, a patchwork of federal and state programmes and incentives drives the renewable power sector in the US.

Twenty-nine states, plus Washington, DC, have enacted binding renewable portfolio standards (RPS). Eight other states have non-binding RPS programmes or renewable energy goals. State RPS programmes operate by setting renewable energy targets for each year and requiring electric utility companies to achieve that level of renewable power. As a result, RPS programmes are the primary drivers for renewable energy investment in the US and are spurring significant investment in renewable energy infrastructure in many states. Collectively, these programmes are expected to dramatically increase the demand for wind power while also driving the expansion of solar and hydrokinetic power. About 16 states also have separate, smaller targets for solar energy, often referred to as a 'solar carve out', which usually operate in tandem with a net metering or feed-in-tariff programme. As solar energy becomes more price competitive, solar carve outs have experienced less support and lower expansion in recent years. RPS compliance is usually managed through a system of tradeable renewable energy credits (RECs), with one REC representing one MWh of renewable power. In general, RECs are registered by state agencies and are tradeable instruments. Most state programmes require compliance through use of RECs or renewable power generated in-state, with limited exceptions and eligible renewable resources and definitions can vary widely by state. This results in fragmented REC markets with prices varying widely by state and resource type.

In addition to mandatory RPS programmes, 'green power' programmes allow US energy consumers (typically residential and commercial) to purchase renewable or 'green' power from their utility company or independent power supplier. Energy suppliers purchase RECs on the voluntary market to meet green power demand. Voluntary REC supply is dominated by wind, though solar is increasing its market share. Prices for voluntary RECs hover around US\$1/MWh, significantly lower than most RECs purchased for compliance purposes. It is estimated that more than 50 per cent of retail customers in the US now have an option to purchasing 'green' or low-carbon power from their utility. Net metering programmes allow grid-connected customers with renewable energy systems installed on their property to offset their electrical usage and sell excess electricity to their utility. Several states have also implemented feed-in-tariff programmes that provide a higher price to consumers generating certain types of renewable energy. These programmes have aided the expansion of residential and commercial solar projects in the US, but several states have recently moved to roll back or eliminate their net metering programmes and others are seeking new ways to properly value solar power. As this debate continues, numerous states have expanded their net metering programmes and are developing pricing mechanisms to reward solar power based on its value to the grid, factoring in time-of-service, displacement of new fossil-fuel generation and infrastructure, and environmental benefits, including GHG reduction.

At the federal level, the Department of Energy's (DOE) loan guarantee programme backs investment in renewable power, energy efficiency and commercial climate technologies. Loans backed by the DOE have supported investment in solar, wind, geothermal, nuclear and energy storage technologies, among others. In 2013, the DOE announced the availability of US\$8 billion in loan guarantees for advanced energy projects that substantially reduce GHGs and other air pollution. In 2014, the DOE announced availability of US\$4.5 billion in loan guarantees available for innovative renewable energy and energy efficiency projects in the US that reduce GHG emissions. The DOE also runs parallel loan programmes for nuclear energy projects and 'advanced fossil energy' projects, each with its own solicitations and funding caps.

Two federal tax credits also provide financial support for renewable energy facilities. The production tax credit provides a tax credit for each kilowatt-hour produced by eligible renewable power facilities. Combined with state RPS programmes, the PTC has been a major driver of wind power development in the US: between 2007 and 2014, US wind capacity nearly quadrupled. In late 2015, the US Congress extended the PTC for facilities that begin construction before 31 December 2019. The business energy investment tax credit (ITC) was also significantly expanded in 2008, which provides tax credits for capital investments in solar energy facilities, fuel cells, small wind turbines, geothermal systems, microturbines, and combined heat and power. The ITC was extended in late 2015, with a gradual step-down in credits between 2019 and 2022.

The federal government is also working to facilitate renewable power generation on public lands through a variety of programmes that are designed to streamline permitting and leasing. For example, the Department of Interior and Bureau of Land Management facilitate a solar energy programme in six western states, and the Bureau of Ocean Energy Management is working to identify and lease offshore wind energy areas for commercial wind development. The Council on Environmental Quality's National Environmental Policy Act (NEPA) rule is also intended to facilitate energy projects. That said, decisions to conduct additional NEPA analysis and ongoing litigation have stalled the realisation of significant offshore wind developments to date.

Wind energy

20 | Describe, in general terms, any regulation of wind energy.

Wind energy projects are subject to a range of federal, state and local environmental, land use and natural resources laws and regulations. A project may require multiple permits and consultation and coordination between multiple agencies. Access to transmission also remains a significant constraint for many wind projects, since wind energy resources in the US are not always located near demand. Developing new or expanded transmission lines can increase the complexity of the above regulatory requirements.

For projects located on federal land, federal land management agencies will likely act as the primary permitting authority. For projects on private or state land, in some states permitting authority is vested in one or more state agencies. In other cases, the primary permitting authority for a wind facility is the local planning commission, zoning board, city council or county board.

The Bureau of Ocean Energy Management (BOEM) administers the offshore wind leasing process on the outer continental shelf (three nautical miles offshore) through a competitive bidding process. Offshore wind projects also must coordinate with the US Coast Guard during construction and to address any navigational hazards. BOEM has held several auctions, resulting in the sale of various leases to develop offshore wind projects, primarily on the east coast. The first wind turbines were installed in US federal waters off the coast of Virginia in 2020. Multiple east coast states have set targets to purchase offshore wind. The timeline for developing an offshore wind project is long and the Trump administration is expected to propose streamlining regulations.

Renewable energy projects have seen significant litigation over environmental impacts and other issues. Litigation may involve local issues, such as noise, siting and site-specific impacts, or may implicate broader state or national policies. With respect to wind energy, impacts on birds are a frequent focus of litigation. The Migratory Bird Treaty Act (MBTA), the Endangered Species Act and the Bald and Golden Eagle Protection Act all protect certain species of birds with civil and criminal penalties. The Trump administration has proposed regulations that would interpret the MBTA as not applying to 'incidental' injuries or killing of birds, such as those caused by wind projects.

Solar energy

21 | Describe, in general terms, any regulation of solar energy.

Solar energy experienced a record year in 2019, accounting for approximately 40 per cent of all new generating capacity nationally, though solar power (both small- and large-scale) generated only 2 per cent of the total electricity in the US. Overall, the US solar market grew by 23 per cent from 2018, despite tariffs on imported solar cells and modules. Federal, state and utility incentives programmes, alongside CO₂ emission reduction targets, largely drove this growth, though many of the incentive programmes are in the process of phasing out, including the federal solar ITC. The ITC, which allows customers of new residential and commercial solar to deduct the cost of installing solar energy systems from their federal taxes, is scheduled to taper off from 30 per cent to 26 per cent in 2020 and eventually expire in 2022. Other states and the District of Columbia continue to offer incentives, such as up-front rebates, tax credits (including exemptions from property and sales taxes), production-based incentives and solar renewable energy credits. Several newly enacted laws focus on ensuring that solar technologies are available to lower-income consumers, including Maine and Virginia. California led the country's electricity generating capacity growth, comprising 43 per cent of small-scale sources, potentially owing in part to the solar mandate going into effect on 1 January 2020,

requiring all new single- and multi-family homes under construction to have a solar system as an electricity source. In addition, an anticipated increase in the need for end-of-life management of photovoltaic (PV) solar panel waste is driving states such as California to take measures in support of streamlined solutions, including through a new 2020 regulation designating PV waste as 'universal waste', alongside electronics, batteries and other low-risk hazardous waste.

These trends reflect how residential solar, as well as commercial- and utility-scale, projects have gained notable traction in an increasing number of jurisdictions across the country. Even so, traditional regulatory approvals and permits are required for these projects, regardless of scale. Residential solar installations, such as rooftop solar projects, generally do not require major regulatory approvals, but are required to meet local and state building, zoning, land use and development regulations – including the acquisition of necessary permits. Rooftop solar projects also commonly face state and local requirements for grid interconnection standards, net metering eligibility, feed-in tariffs and state RPS regulations. Larger commercial- and utility-level solar energy projects implicate a much larger array of federal, state and local laws – including those concerning land access, siting, water rights, transmission and environmental review – all of which may be subject to litigation in the process of seeking regulatory approvals.

Hydropower, geothermal, wave and tidal energy

22 | Describe, in general terms, any regulation of hydropower, geothermal, wave or tidal energy.

The Federal Energy Regulatory Commission (FERC) issues licences for construction of new hydropower projects. During the permitting process, FERC and the applicant must assure compliance with NEPA and must obtain a water quality certification from the appropriate state agency under the Clean Water Act (CWA). In many cases, permittees also must obtain authorisations under various federal laws, including those protecting wildlife, such as the Endangered Species Act. In some states, additional authorisation may be required for hydropower resources to qualify for RPS or net metering programmes. With climate change an increasing concern, some states have increased focus on hydropower as a source of energy; in particular, states in the north-east are exploring ways to import more hydropower from Canada and increase capacity and production at existing hydropower facilities. On 1 June 2020, EPA finalised a rule revising its regulations for the CWA water quality certification process intended to promote hydropower projects. This rule is expected to be challenged by litigation.

Geothermal projects are regulated by a mix of federal and state agencies, with requirements varying by state and whether the project is located on state, federal or private land. The Geothermal Steam Act of 1970 requires the Department of the Interior to establish rules and regulations for the leasing of geothermal resources on lands managed by federal agencies. These regulations are issued by the Bureau of Land Management. Existing EPA Underground Injection Control Regulations under the federal Safe Drinking Water Act define Class V injection wells to include injection wells associated with the recovery of geothermal energy.

Waste-to-energy

23 | Describe, in general terms, any regulation of production of energy based on waste.

Waste-to-energy is defined as a renewable energy source in many states and plants are therefore eligible to sell RECs. By the end of 2019, the US had fewer than 75 waste-to-energy facilities that combust municipal solid waste. There has been little development of new waste-to-energy plants since the 1980s and the 1990s; the first new

waste-to-energy plant since 1995 was built in 2015. As combustion units, waste-to-energy systems are subject to regulatory requirements that are similar to fossil-fuel fired power plants, but often significantly more stringent. The US Clean Air Act (CAA) imposes numerous requirements on waste-to-energy facilities, which also must comply with the CWA, the Resource Conservation and Recovery Act and other federal, state and local laws. Waste-to-energy facilities and related ash landfills have come under increased legal and regulatory scrutiny in recent years and are at times the subject of lawsuits brought under environmental laws.

Biofuels and biomass

24 | Describe, in general terms, any regulation of biofuel for transport uses and any regulation of biomass for generation of heat and power.

In 2007, EPA established a national Renewable Fuel Standard (RFS) programme that requires transportation fuel refiners to displace certain amounts of petrol and diesel with renewable fuels such as cellulosic biofuel, biomass-based diesel and advanced biofuel. The programme established the annual renewable fuel standards, responsibilities of refiners and other fuel producers, a trading system, compliance mechanisms and record-keeping and reporting requirements. Companies that refine, import or blend fossil fuels are obligated to meet certain individual RFS quotas based on the volume of fuel they introduce into the market. The production of biofuels is also subject to regulation under the CAA and other environmental laws.

EPA has scaled back biofuel requirements to account for declining petrol use and technical limitations related to ethanol blending and biofuel production. In November 2015, EPA finalised a goal of 18 billion gallons of renewable fuels for 2016. This was a modest increase from the agency's June 2015 proposal, but it is still short of the 22.25 billion gallons required by Congress. Still, the 18 billion gallons goal exceeds 10 per cent of the projected petrol production for 2016, which some US carmakers advised could negatively affect the performance of cars and may violate certain warranties. EPA adopted a new ethanol rule in 2019, which allows fuel blends containing up to 15 per cent ethanol to be sold year-round in 31 states.

Farming interests are pressing for an increase in biofuel requirements, in particular for increased cellulosic ethanol targets, while petroleum companies and some vehicle manufacturers advocate lower requirements. President Trump has expressed support for biofuel requirements and it is likely that EPA will continue its path of modest, year-over-year, increases in biofuels requirements. Reflecting that trend, on 19 December 2019, EPA adopted rules finalising RFS volume requirements for 2020, which contained modest biofuel increases from 2019 levels.

On 23 April 2018, EPA issued a policy statement indicating 'EPA's policy in forthcoming regulatory actions will be to treat biogenic CO₂ emissions resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral.' Within the 2018 policy statement, EPA indicated that its policy 'is not a scientific determination and does not revise or amend any scientific determinations that EPA has previously made'. Instead, EPA's goal was to 'promote the environmental and economic benefits of the use of forest biomass for energy at stationary sources, while balancing uncertainty and administrative simplicity when making programmatic decisions', acknowledging the need for clear regulatory policy even in the face of continued debate on an accounting framework for biogenic CO₂ emissions.

EPA has continued to work on its proposal declaring woody biomass carbon neutral. In February 2020, EPA submitted its woody biomass proposed rule to the White House Office of Management and Budget

for review. The rule has not yet cleared review. One noted reason for the delay is disagreement between EPA and the Justice Department over potential conflicts the rule may have with the recently adopted Affordable Clean Energy Rule governing power plant GHG emissions. There is no anticipated date that the rule will clear review or be finalised.

Carbon capture and storage

25 | Describe, in general terms, any policy on and regulation of carbon capture and storage.

Carbon capture and storage (CCS) has substantial potential to reduce GHG emissions from industrial sources, but has not been widely demonstrated on a commercial scale. Several large CCS demonstration projects in the US are largely supported by resources allocated by the American Recovery and Reinvestment Act of 2009, as well as a variety of federal and state incentives, including tax credits and loan guarantees. On 1 December 2010, EPA published its final rule concerning an expansion of its GHG reporting rule to include facilities that inject and store CO₂ for geologic sequestration or enhanced oil and gas recovery. CCS has also begun to play an important role as a potential control technology for GHG regulations for power plants and President Trump has called for the expansion of technologies to reduce the emissions generated from coal-fired power plants.

In January 2014, EPA issued a final rule excluding CO₂ streams in CCS projects from classification as a hazardous substance under the Resource Conservation and Recovery Act, provided that the streams are injected into Class VI wells and not mixed or co-injected with any hazardous wastes. CCS projects are potentially affected by several other regulatory programmes. For instance, NEPA and state equivalents may present regulatory hurdles by requiring environmental review of project impacts. State and local agencies may also impose permitting requirements on CCS projects. High costs, complex regulatory schemes and the low price of natural gas have hindered the widespread development of CCS projects. In the future, lower technology costs and the development of multiple revenue streams from the CO₂ associated with CCS projects, particularly using captured CO₂ for enhanced oil recovery (EOR), may help spur CCS additional development.

In mid 2020, the Treasury Department proposed rules to implement section 45Q of the Tax Code, which provides tax credits for capturing and sequestering carbon oxides that would otherwise escape to the atmosphere. If finalised, these rules will provide: tax credits of up to US\$50 per ton of carbon captured and placed in secure geological storage; and tax credits of up to US\$35 per ton of carbon injected into oil or natural gas wells for EOR, and for carbon captured and sequestered using photo-synthetic or chemosynthetic processes or 'for any other purpose for which a commercial market exists'.

CLIMATE MATTERS IN TRANSACTIONS

Climate matters in M&A transactions

26 | What are the main climate matters and regulations to consider in M&A transactions and other transactions?

Entities must consider a range of climate issues when undertaking M&A transactions. Risks generally fall into three categories: regulatory, economic and operational risk related to climate change impacts. Some matters also present M&A opportunities, such as incentives related to renewable energy. Matters to consider include:

- GHG reporting and permitting obligations for certain sectors;
- EPA regulation of GHG emissions and related costs for higher-emitting industries;
- regulatory uncertainty resulting from the lack of a comprehensive national climate change programme;

- regulatory costs associated with assuring compliance with a plethora of federal, state and local climate change, energy efficiency and renewable energy programmes;
- litigation exposure to claims based upon alleged climate impact of corporate operations or of climate changes on corporate operations;
- direct and indirect effects of higher energy costs;
- financial disclosure and compliance obligations under Securities and Exchange Commission rules and state laws;
- adherence to the Equator Principles, if applicable, which include requirements for climate impacts;
- impacts to coastlines, ports and other infrastructure related to increased storm intensity and rising sea levels;
- impacts to natural resources and commodities related to climate change, such as water supplies, fisheries, forestry products and crops;
- global economic and security risks related to potentially destabilising impacts of climate change in certain regions; and
- market opportunities related to renewable power, REC and offset trading, GHG mitigation and energy efficiency.

UPDATE AND TRENDS

Emerging trends

27 | Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

The election of Donald Trump as President has had significant ramifications for climate regulation in the US. While the previous administration under President Obama had taken numerous actions on climate change, including ratification of the historic Paris Agreement, the Trump administration has reversed course on many of those measures. It is likely that the US will withdraw from the Paris Agreement and may also revisit its commitment to other international agreements related to climate and environmental issues. Whatever the outcome of the 2020 presidential election, it is sure to have a significant impact on future US climate change policy and law.

At the same time, many states have announced plans to continue or increase climate regulation at the state level and through regional programmes such as the Regional GHG Initiative and the US Climate Alliance. Eighty cities have also expressed a willingness to increase their focus on GHG emissions, improve resiliency to climate change impacts and expand clean energy efforts. Market forces also continue to drive the rapid expansion of wind and solar energy, and offshore wind power is poised to become a commercial reality in the US within the next five years. Collectively, these subnational measures, as well as private-sector initiatives taken in response to consumer demand, are significant but likely inadequate to reduce US emissions to levels previously committed to under the Paris Agreement. It is likely that the focus on climate change and renewable energy will persist or increase in some states, but that the US will not take significant action at the international or national level, under the current administration, to reduce GHG emissions.

Coronavirus

- 28 | What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

Federal and state governments in the US have offered little or no relief for climate change regulations during the pendency of the covid-19 pandemic. GHG regulatory regimes continue to apply as usual, and regulated entities should remain focused on any current compliance obligations. If anything, action on climate change issues has accelerated during the pandemic, with several bills introduced in the US Congress to further regulate climate change, and action has been taken by several states to strengthen current climate change regulatory programmes or introduce new programmes.

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