

THE ENVIRONMENT  
AND CLIMATE  
CHANGE LAW  
REVIEW

THIRD EDITION

Editor  
Theodore L Garrett

THE LAWREVIEWS

# THE ENVIRONMENT AND CLIMATE CHANGE LAW REVIEW

THIRD EDITION

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# PREFACE

Environmental law is global in its reach. Multinational companies make business plans based on the laws and regulations of the countries in which they are headquartered and have manufacturing facilities as well as the countries in which they distribute and sell their products. Moreover, multinational companies have global environmental, health and safety goals and practices that tend to be worldwide in their scope for reasons of policy and operational consistency.

For these and other reasons, this third edition of *The Environment and Climate Change Law Review* is timely and significant. This book offers a review, by leading environmental lawyers, of significant environmental laws and issues in their respective countries around the world, with updates since last year's edition.

Climate change continues to dominate international environmental efforts, and we have also witnessed efforts to promote sustainability. Many countries are making efforts to promote conservation and renewable or green energy. Changes in reliance on coal and nuclear energy have impacts on the demand for other energy sources. All of these changes have impacts on efforts to reduce greenhouse gases.

Environmental law continues to change and evolve, as new regulations are adopted and existing rules are amended or challenged in courts or interpreted by agencies. In the United States, 2017 has seen the election of a new President and an administration that have different priorities in the related areas of environment and energy. Future editions of this book will continue to focus on changes and developments.

This book presents an overview and, of necessity, omits many details. The book should thus be viewed as a starting point rather than a comprehensive guide. Each chapter of this book, including mine, represents the views of the author in his or her individual capacity, and does not necessarily reflect the views of the authors' firms or clients, or the authors of other chapters, or my views as the editor. This book does not provide legal advice, which should be obtained from the reader's own lawyers.

I wish to thank the many authors who contributed their time and expertise to the preparation of the various chapters to this book. I also wish to thank the editors at Law Business Research for their continued attention to this project. We hope this book helps you to gain a better understanding of environmental law in various countries around the globe.

**Theodore L Garrett**

Covington & Burling LLP

Washington, DC

United States

January 2019

# AUSTRALIA

*Jennifer Hughes, Ilona Millar and Roopa Varadharajan*<sup>1</sup>

## I INTRODUCTION

Australia operates under a federal political regime, with a federal government, six states and several territories, including two mainland territories each having their own political frameworks and ability to pass legislation. In Australia, environmental laws and policies are made at both the state and federal levels.

## II LEGISLATIVE FRAMEWORK

### i Commonwealth legislation

Australia's Constitution does not contain an express power for the federal government to make laws concerning environmental protection. However, the federal government has relied upon the external affairs power to enact environmental legislation to achieve the aims of international treaties, for example the Convention on Biological Diversity. The federal government has also relied on its other constitutional powers to legislate, including trade and commerce, corporations, the race power and finance and taxation powers.

The Environment Protection and Biodiversity Conservation Act 1999 (Cth) (the EPBC Act) is Australia's primary environmental legislation and includes over 500 sections that aim to protect and manage matters of national environmental significance.<sup>2</sup> The EPBC Act and its regulations establish processes for the approval and assessment of actions that significantly impact these matters. The EPBC Act also provides for strategic planning and management of Australia's fisheries and the management of federal protected areas, including marine reserves. There are also other federal environmental laws that deal with more specific environmental issues.<sup>3</sup>

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1 Jennifer Hughes is a partner, Ilona Millar is a special counsel and Roopa Varadharajan is an associate at Baker McKenzie.

2 This includes nationally listed threatened species and ecological communities, Ramsar wetlands, migratory birds, cetaceans, heritage places and protected areas.

3 These include the Aboriginal and Torres Strait Islander Heritage Protection Act 1984, a series of Antarctic acts, the Hazardous Waste (Regulation of Exports and Imports) Act 1989, a series of Great Barrier Reef Marine Park acts, the Australian Heritage Council Act 2003, a series of ozone protection and synthetic greenhouse gas acts, the Environment Protections (Sea Dumping) Act 1981 and the Historic Shipwrecks Act 1976.



## **ii International agreements**

Australia is a party to multiple international agreements to protect the environment, including the United Nations Framework Convention on Climate Change,<sup>4</sup> the Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Wetlands (the Ramsar Convention) and the Convention for the Protection of the World Cultural and Natural Heritage. In addition, Australia is a party to bilateral environmental agreements, including Agreements with Japan<sup>5</sup> and China<sup>6</sup> on protection of migratory birds and their environment.

## **iii State and territory legislation**

Australian states can enact environmental laws providing they do not conflict with any Commonwealth legislation. The Commonwealth legislation will prevail if it conflicts with a state law.<sup>7</sup> In the territories,<sup>8</sup> ministers possess executive powers regarding environmental protection and legislative assemblies may enact laws on issues within the authority of the relevant minister.<sup>9</sup>

In New South Wales (NSW), for example, major environmental laws are located in the Environmental Planning and Assessment Act 1979 (the EP&A Act) (which provides a system of planning and assessment, including an approval process for developments of either local or state significance) and the Protection of the Environment Operations Act 1997 (the POEO Act) (which aims to protect, restore and enhance the quality of the environment in NSW). Other environmental issues regulated by the states and territories include contaminated land management, environmentally hazardous chemicals, forestry, pesticides, radiation control and waste avoidance and management.

# **III THE REGULATORS**

## **i Federal**

The Department of the Environment and Energy (the Department) is responsible for enforcing the EPBC Act.

## **ii State and territory**

Most of the states and territories have designated environmental regulators as well as other government departments and authorities with regulatory powers. In NSW, for example, the NSW Environment Protection Authority (EPA) issues environment protection licences under the POEO Act, monitors emissions, investigates pollution and prosecutes individuals and corporates who break environmental laws; the Office of Environment and Heritage

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<sup>4</sup> Australia has also ratified both the Kyoto Protocol and the Paris Agreement.

<sup>5</sup> The Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (JAMBA) (1974).

<sup>6</sup> Agreement between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment (CAMBA) (1986).

<sup>7</sup> Constitution, Section 109; *Commonwealth v. Tasmania* (1983) 46 ALR 625.

<sup>8</sup> Including the Australian Capital Territory, the Northern Territory and Norfolk Island.

<sup>9</sup> Northern Territory (Self Government) Regulations 1978 r 14; Australian Capital Territory (Self Government) Act 1988 Section 22 and Sch 4; Norfolk Island Act 1979; see also Gerry Bates, *Environmental Law in Australia* (6th ed, 2006, LexisNexis Butterworths) at p. 51.

administers some environmental laws, for example the Heritage Act 1977, the National Parks and Wildlife Act 1974 and the Biodiversity Conservation Act 2016; and the Department of Planning and local councils also enforce planning and some environmental laws.

In many states and territories, any person can enforce environmental and planning laws by bringing proceedings in the appropriate courts. In certain cases, this can extend to criminal proceedings.

### iii Courts

There are specialist environmental courts in NSW, Queensland and South Australia (SA).<sup>10</sup> The NSW Land and Environment Court, for example, has an appellate and review jurisdiction that includes merits review, judicial review, civil enforcement, criminal appeals and civil claims relating to planning, environmental and mining legislation.

## IV ENFORCEMENT

### i Federal enforcement

The main offence provisions under the EPBC Act relate to taking an action that has, will have or is likely to have a significant impact on a matter of national environmental significance without approval, for example, clearing land that is habitat for a nationally listed threatened species without approval.<sup>11</sup>

A person who commits an offence can be liable for a civil penalty of up to A\$1.05 million for an individual and A\$10.5 million for a body corporate, or for a criminal penalty of seven years' imprisonment or a penalty of A\$88,200, or both. The Department has, in the past, brought proceedings and obtained significant penalties for breaches of the Act, including a A\$450,000 penalty for the deliberate clearing of a Ramsar wetland.<sup>12</sup> The Department has also prosecuted a number of people for unlawfully fishing in Commonwealth marine reserves.<sup>13</sup>

The EPBC Act allows third parties to seek injunctions to remedy or restrain breaches of the Act if they demonstrate that they are an organisation whose objects or purposes include protecting, conserving or conducting research into the environment, or an individual who has engaged in those activities in the preceding two years.<sup>14</sup> This provision has enabled a number of conservation groups to make administrative law challenges to decisions of the Federal Minister for the Environment under the EPBC Act, for example, approval of large coal mines.<sup>15</sup> It has also been used to successfully obtain an injunction to prevent a Japanese whaling company from conducting whaling in Australia's Antarctic territory.<sup>16</sup>

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10 These are respectively the NSW Land and Environment Court, the Planning and Environment Court (Queensland) and the Environment, Resources and Development Court (South Australia).

11 See, for example, *Minister for Environment, Heritage and the Arts v. Lamattina* (2009) 167 LGERA 219.

12 *Minister for the Environment and Heritage v. Greentrees* (No.3) [2004] FCA 1317.

13 See, for example, *Minister for the Environment and Heritage v. Wilson* [2004] FCA 2.

14 Section 475 EPBC Act.

15 See, for example, *Australian Conservation Foundation Incorporated v. Minister for the Environment* (No. 2) [2016] FCA 1095.

16 *Humane Society International Inc v. Kyodo Senpaku Kaisha Ltd* [2006] FCAFC 116.

## **ii State and territory enforcement**

At the state and territory level the penalties for undertaking development or causing pollution without the necessary approvals or licences can be significant. In NSW, the POEO Act takes a tiered approach to breaches of the Act. Tier 1 offences are the most serious and will usually involve conduct that is wilful or negligent, and can attract penalties of up to A\$5 million for corporations, and A\$1 million and seven years' imprisonment for individuals. Tier 2 offences include water, air, noise or land pollution, waste offences and breaches of licence conditions. These offences can attract penalties of up to A\$2 million for corporations and A\$500,000 for an individual for a failure to notify a pollution incident, and A\$1 million for corporations and A\$250,000 for individuals for other offences. Tier 3 offences are dealt with by penalty notices (on the spot fines) of up to A\$15,000. A similar tiered approach is adopted under the NSW EP&A Act.

In a number of states there is a positive statutory obligation to inform the relevant regulatory authority if certain types of environmental incidents have occurred or land is contaminated. Failure to comply with these obligation is an offence. The types of notifiable incidents can, at times, be relatively minor.

## **iii Environmental torts**

Environmental torts and class actions are not common in Australia, probably because our statutory environmental laws give regulators strong powers to require clean-up after environmental incidents. The area in which they are most likely to occur is where contamination has migrated from one site to another, the contamination is not so serious as to have the regulator get involved, but damage has been suffered by an adjoining landowner.

## **iv Corporate liability**

Corporations in Australia can be found guilty of environmental offences by reason of the conduct of their officers, employees and, in some circumstances, subcontractors.

In NSW, legislation has broadened the potential scope of an employer's liability for an employee's actions. Provided that the employee is acting within the scope of his or her employment, the employer may be prosecuted for the employee's breach or omission.<sup>17</sup>

A company (and its directors and managers) may also be liable for the actions of subcontractors in certain circumstances. This will usually be the case where inadequate instructions are given or if the contractor has not been properly supervised. In *SPCC v. Australian Iron & Steel Ltd* (1992) it was held that a company was liable for acts of an independent contractor where the contractor caused a large spill of oil and tar by mistakenly cutting pipes containing the oil. Liability was attributed to the company on the basis that the instructions given were not sufficiently clear and that inadequate supervision was provided given the recognised potential danger of oil spilling from the pipes if cut. By contrast, in *SPCC v. Blue Mountains City Council* (1991) the Council was not liable for the action of a contractor where the Council could not have been aware of, or have had control over, the actions of the contractor.

In NSW a licence holder will automatically be found to be guilty of the offence of a breach of a licence condition even if the breach was committed by a contractor.

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17 *Tiger Nominees Pty Ltd v. State Pollution Control Commission* (1992).

## **v Director liability**

Environmental legislation in most jurisdictions exposes not only companies, but directors and persons concerned in the management of the company to liability for offences of the corporation. For example, in Western Australia, where an offence committed by the corporation is proved to have been committed with the consent or knowledge of a director or other officer concerned in the management of the corporation; or owing to any neglect on his or her part, the director or officer may also be guilty of the offence. It is not necessary for the corporation to be prosecuted for such liability to arise.

Persons ‘concerned with the management’ of a corporation include various levels of management; from state and regional managers to depot or facility managers. They may also include supervisors and certain senior employees.

In NSW, environmental offences are divided into the more serious ‘general executive liability offences’ and then ‘special executive liability offences’. For general executive liability offences, a director or manager of a company commits the same offence as his or her company unless he or she can prove that he or she:

- a* was not in a position to influence the conduct of the company; or
- b* used all due diligence to prevent the offence by the company.

For special executive liability offences, the prosecution bears the legal burden of proving all of the elements of an offence before a director or manager can be found to be guilty of the same offence as his or her company, the elements being:

- a* the corporate officer of the corporation commits an offence where the person knows or ought reasonably to have known that the executive liability offence would be or is being committed; and
- b* that person fails to take all reasonable steps to prevent or stop the commission of the offence.

In Queensland, liability has recently been extended beyond corporations and corporate officers through the passing of the Environmental Protection (Chain of Responsibility) Amendment Act 2016. The Act empowers the Department of Environment and Heritage Protection (EHP) to enforce and recover costs against a company’s ‘related persons’. Related persons may include (subject to certain qualifications), a holding company, an owner of land on which the company carries out or has carried out an activity, or a person that the EHP decides has a ‘relevant connection’ to the company.

## **V REPORTING AND DISCLOSURE**

### **i Environmental audits**

Similar to other jurisdictions, with the introduction of ISO 14000 environmental management standards, a number of companies are incorporating periodic environmental audits into their management systems.

In some cases, government agencies may initiate environmental audits, for example through conditions of environmental licences.<sup>18</sup> In NSW, conditions requiring mandatory environmental audits can only be imposed where the appropriate regulatory authority

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18 See, for example, in NSW Section 174 POEO Act.

reasonably suspects that there has been a contravention of the Act and the contravention has caused, or is likely to cause, harm to the environment.<sup>19</sup> Companies are also able to undertake voluntary environmental audits under the POEO Act in NSW. In doing so, documents prepared for the audit may be protected and inadmissible in enforcement proceedings and cannot be inspected or seized by the EPA.<sup>20</sup>

## **ii Reporting requirements**

Environmental reporting is imposed through a number of federal, state and territory laws. At the federal level, the National Greenhouse and Energy Reporting Act 2007 (Cth) provides a framework for corporations to report on greenhouse gas (GHG) emissions, energy use and energy production, where reporting thresholds for the corporate group or individual facilities are exceeded.

Environmental reporting obligations are also commonly imposed on companies undertaking licensed activities through conditions placed upon environmental or development approvals or environment protection licences. These may require annual compliance reporting or more frequent reporting of monitoring results for air and water discharges.

## **iii Notifiable incidents and contamination**

As stated above, in a number of states there is a positive statutory obligation to inform the relevant regulatory authority if certain types of environmental incidents have occurred or that land is contaminated. Failure to comply with this obligation is an offence. The types of notifiable incidents can, at times, be relatively minor.

# **VI ENVIRONMENTAL PROTECTION**

## **i Air quality**

Air quality is regulated in Australia at both the federal and state level.

The National Environment Protection (Ambient Air Quality) Measure was established in 1998. It aims to provide a common national goal to best protect human health and well-being from the adverse impacts of air pollution. It provides a consistent framework to assess Australia's outdoor air quality by setting national ambient air quality standards for six common air pollutants<sup>21</sup> as well as mandatory monitoring and reporting requirements against these standards for participating jurisdictions. Obligations under this Measure are generally assumed by governments rather than emitters.

On 15 December 2015, Australia's federal and state environment ministers entered into the National Clean Air Agreement. The Agreement, implemented through the National Environment Protection Council, focuses on actions to reduce air pollution and improve air quality through cooperative action between industry and government at the national, state and local levels. Obligations under this Agreement are also generally assumed by governments rather than emitters.

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19 Section 175 POEO Act.

20 Sections 180–183 POEO Act.

21 Carbon monoxide, nitrogen dioxide, photochemical oxidants (as ozone), sulphur dioxide, lead and particles (such as PM10 and PM2.5).

The initial focus of the Agreement will be to:

- a* introduce emission standards for new non-road spark ignition engines and equipment (such as garden equipment and marine outboard motors);
- b* adopt measures to reduce air pollution from wood heaters, including the adoption of new emission and efficiency standards for new wood heaters and sharing best management practices across jurisdictions; and
- c* strengthen ambient air quality reporting standards for particle pollution based on the latest scientific understanding of the health risks arising from airborne particle pollution.

At the federal level, the National Environment Protection (National Pollutant Inventory) Measure (NPI NEPM) sets out national objectives for protecting particular aspects of the environment, which may also affect air quality. More than 4,000 facilities from a wide range of industry sectors that exceed NPI reporting thresholds for the emission of NPI substances to air, land and water are required to report annually to relevant state or territory environment agencies under the NPI NEPM. This reporting enables the NPI to collate and disseminate data about emissions on a geographic, sectoral and facility level.

The federal government also regulates the manufacture, import and export of ozone depleting substances and synthetic GHG through the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 (Cth) and related acts and regulations. This framework is intended to assist Australia to meet its obligations under the Montreal Protocol.<sup>22</sup>

State and territory governments implement legislation, statutory instruments, policies and programmes in their own jurisdictions in order to meet the Ambient Air Quality NEPM standards and manage the collection of data under the NPI NEPM. For example, Victoria has adopted the State Environment Protection Policy (Air Quality Management) and the State Environment Protection Policy (Ambient Air Quality), which set standards for the discharge of major pollutants from sources, including industrial premises, with a view to controlling air pollution. The EPA monitors achievement of the ambient standards and encourages a range of measures to improve air quality such as promoting clean technology, discouraging open-air burning, using tall stacks to promote dispersion and reducing exhaust pollutants from vehicles.

State and territory governments also implement legislation, policies and programmes to meet their own individual goals in relation to air emissions, such as via specific legislative provisions and licence conditions.

## **ii Water management and water quality**

Responsibility for water resources is primarily vested in the state and territory governments; however, the federal government does exercise certain powers under the Water Act 2007 (Cth) in relation to the management of the Murray Darling Basin, which stretches across the eastern states of Australia, and in respect of water information and data collection. In most cases, there are separate regimes related to water management and water quality.

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22 The Montreal Protocol on Substances that Deplete the Ozone Layer.

Water management legislation usually provides for:

- a* the preparation of water management plans for water resource areas<sup>23</sup> to support the sustainable use of available water and protect environmental values of those ecosystems;
- b* the grant of licences or other entitlements to take and use water for various purposes,<sup>24</sup> having regard to the availability of water at different times;
- c* approvals for the construction of works to take and use water;<sup>25</sup>
- d* rules to facilitate trading of water entitlements; and
- e* powers of regulators to investigate and enforce the legislation.<sup>26</sup>

Water quality issues are then separately regulated through pollution control legislation that creates offences for the pollution of water and sets water discharge limits and monitoring requirements through environment protection licences.

At the federal level, the National Water Quality Management Strategy (NWQMS) is a joint national approach to improving water quality in Australian and New Zealand waterways. It was developed in cooperation with state and territory governments. The NWQMS aims to protect the nation's water resources by improving water quality while supporting the businesses, industry, environment and communities that are dependent on water for their continued development.

At the state level, Victoria has adopted environmental quality objectives through its State Environment Protection Policy (Waters of Victoria) (SEPP). The SEPP sets the level of environmental quality required to protect aquatic ecosystems. If the objectives are not met, it signals a potential risk to the ecosystem, which is then investigated by the EPA using the risk-based approach. Similarly, in NSW, the government released the Water Reform Action Plan in response to the independent investigation into NSW water management and compliance. The Water Management Act 2000 (NSW) was amended to deliver the legislative amendments required to implement the Water Reform Action Plan, and a new independent Natural Resource Access Regulator has been established to oversee water-related compliance.

In NSW, Section 120 of the POEO Act prohibits water pollution. The only defence is to establish that the pollution arose from a regulated activity and the requirements of that regulation were not contravened.<sup>27</sup> There have been a number of recent cases in the NSW Land and Environment Court where companies have received significant fines for water pollution offences. These include a A\$360,000 fine for a chemical company found guilty of discharging a number of hazardous chemicals into a pond that drained into a local waterway causing significant environmental harm;<sup>28</sup> and a fine of A\$187,500 to a water utility found guilty of water pollution and breaches of licence conditions resulting from fluoride and chlorine being discharged into a local creek.<sup>29</sup> The EPA has also issued a number of A\$15,000 penalty notices to companies for water pollution incidents during 2016, demonstrating a commitment to enforcing pollution prohibitions. Similar water pollution offences apply in other states and territories.

<sup>23</sup> These include river catchments or groundwater aquifers.

<sup>24</sup> These include utilities, irrigation, mining, stock and domestic.

<sup>25</sup> These include bores, pumps and pipelines.

<sup>26</sup> See for example, the Water Management Act 2000 (NSW) and the Water Act 2000 (Qld).

<sup>27</sup> Section 121 Protection of the Environment Operations Act 1997 (NSW).

<sup>28</sup> *EPA v. Custom Chemicals Pty Ltd* [2016] NSWLEC146.

<sup>29</sup> *EPA v. Hunter Water Corporation* [2016] NSWLEC76.

During 2016, the impacts of mining activities on groundwater availability and quality came into the spotlight in Queensland when the government introduced the Environmental Protection (Underground Water Management) and Other Legislation Amendment Act 2016 (Qld). This Act introduces a new requirement for resource sector operators (i.e., in the mining petroleum and gas sectors) to obtain an associated water licence for some projects and to carry out additional environmental impact assessment for site-specific environmental authority applications if they involve taking groundwater. Operators may also have 'make-good' obligations or requirements to enter into agreements with landholders if their activities impact upon groundwater availability.

### iii Chemicals

The Federal Department is responsible for undertaking environmental risk assessments of industrial and agricultural chemicals for the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) and the Australian Pesticides and Veterinary Medicines Authority (APVMA). The responsibilities of NICNAS derive from the Industrial Chemicals (Notification and Assessment) Act 1989 and include:

- a* assessing new industrial chemicals for health and environmental risks;
- b* maintaining the Australian Inventory of Chemical Substances;
- c* managing the Register of Industrial Chemical Introducers;
- d* compelling commercial importers and manufacturers to notify industrial chemicals that are new to Australia;
- e* providing information and making recommendations about chemicals to other government agencies responsible for the regulation of industrial chemicals; and
- f* administering the Cosmetic Standard 2007.

APVMA performs similar regulatory functions in relation to chemicals used solely for purposes relating to agriculture, gardening, pesticides, pool sanitisers, veterinary medicine, and pets and livestock.

The Department has recently decided to reform the regulation of industrial chemicals in the country. Six bills were introduced to Parliament on 1 June 2017, the key one being the Industrial Chemicals Bill 2017. This Bill aims to reduce red tape and improve the safety risk framework for industrial chemicals in Australia. It establishes a new scheme, the Australian Industrial Chemicals Introduction Scheme, which will replace the NICNAS. Notably, the bill implements the government's 2016 election commitment on animal testing, banning the use of animal testing data for industrial chemicals, where those chemicals are intended solely for an end use in cosmetics.

The other bills deal with transitional arrangements and the introduction of various fees and charges. The bills were passed unamended through the House of Representatives on 17 October 2017 and are currently before the Senate. It was previously proposed that they would come into effect on 1 July 2018; however, to assist regulated entities to adequately prepare for compliance with the new scheme, the Australian government has deferred commencement of the scheme until 1 July 2019.

The Department is also responsible for managing Australia's engagement with, and obligations under, international treaties relating to hazardous and persistent chemicals,



for example, gathering information about persistent organic pollutants<sup>30</sup> and developing strategies to reduce or eliminate their use and environmental exposure in accordance with a National Implementation Plan.

Similar to air quality, the federal government has recently been cooperating with state and territory environment ministers to establish a National Standard for environmental risk management of industrial chemicals. A Draft National Standard was released for public consultation on 24 November 2016 and closed on 3 March 2017. It is currently being considered by the environment ministers. The objects of the Draft National Standard are to:

- a* achieve better protection of the environment through improved management of the environmental risks posed by industrial chemicals; and
- b* provide a nationally consistent, transparent, predictable and streamlined approach to environmental risk management of industrial chemicals for governments, industry and the community.<sup>31</sup>

Under the Draft National Standard, industrial chemicals are categorised as low, medium or high risk and broken into seven specified categories, or environmental schedules. Each of the environmental schedules has a set of outcomes-based risk management measures. Responsibility for managing the environmental risks of chemicals throughout their life cycle is then targeted at those who have the capacity to best manage them. This is intended to allow industry to manage risk efficiently and clearly separate regulatory responsibilities for government.

State and territory governments also play a role in managing the use and disposal of industrial chemicals. Certain activities involving the manufacture or use of chemicals may be regulated by EPAs and require environment protection licences to be held. Further, the disposal of certain chemicals will in most jurisdictions only be permissible at facilities licensed to receive them.

#### **iv Solid and hazardous waste**

The waste industry in Australia is highly regulated, primarily by state and territory governments through their EPAs.

At the federal level, legislation has been introduced to manage certain activities relating to hazardous waste, used packaging waste and promote product stewardship. The Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Cth) regulates the export, import and transit of hazardous waste within and outside Australia. The Act was developed to enable Australia to comply with specific obligations under the Basel Convention on the Control of the Transboundary Movements of Hazardous Wastes and their Disposal.

The main functions performed by the Department in relation to hazardous waste include processing of export, import and transit permit applications under the Act; ensuring compliance and enforcement with the Act; and participating in domestic and international policy development under the Basel Convention.

The National Environment Protection Measure on Used Packaging Materials (the Australian Packaging Covenant) provides a framework where voluntary signatories make

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30 In order to meet obligations related to chemical management under the Stockholm Convention on Persistent Organic Pollutants.

31 Draft National Standard for Environmental Risk Management of Industrial Chemicals, Commonwealth of Australia 2016.

commitments to practise product stewardship throughout the life cycle of consumer packaging. This includes through the design of packaging to minimise the use of materials and eliminate excess packaging; adopting and implementing the Environmental Code of Practice for Packaging; supporting materials recovery systems; and reporting and demonstrating continuous improvement. 'Brand owners' of consumer products who do not sign up to the Australian Packaging Covenant and who have a gross annual income of A\$5 million or more are required to comply with obligations to recover, reuse and recycle in accordance with targets set by relevant regulatory authorities. They are also required to prepare a waste action plan and to keep certain records. These obligations are imposed under environmental laws in each Australian state and territory, and there are penalties for non-compliance.

Under the Product Stewardship Act 2011 (Cth) the life cycle of products, materials and industries can be regulated through voluntary approaches, co-regulatory approaches and mandatory obligations. To date, regulations have only been passed to support a co-regulatory approach for the recycling of televisions and computers. These regulations require liable parties to notify the Minister each year of how many products (identified by product code) in the class of products they imported in the financial year. Approved co-regulatory arrangements are then responsible for the collection and recycling of computers (usually an administrator). This usually involves providing access to collection services or sites. Voluntary approaches have been adopted for used tyres and mercury containing lamps.

At the state and territory level, most jurisdictions adopt an approach to waste management that looks at management options in the following order:

- a* avoidance;
- b* recovery (e.g., reuse, reprocessing and recycling); and
- c* treatment, contaminant and disposal.

By way of example, the NSW EPA has produced guidelines on waste avoidance and resource recovery under the NSW Waste and Resource Recovery Strategy 2014–2021, which prioritise avoidance as a primary measure, with measures then cascading into recycling, diverting waste from landfill, reducing litter and finally responsible disposal of waste. The target for the diversion of waste from landfill is increasing from 63 per cent in 2014–2015 to 75 per cent by 2021.

Specific waste provisions in each state and territory generally regulate production and storage of some waste, transport, disposal and reuse of waste. In some circumstances, an offence can be committed by a previous owner of waste if that waste is not disposed of properly by a contractor, unless the due diligence defence can be established.

Another increasing trend in Australian jurisdictions relating to product stewardship is the container deposit schemes (CDS). CDS has been introduced in SA, Northern Territory (NT), NSW, Queensland and the Australia Capital Territory (ACT). The Western Australia CDS is due to commence in early 2020.

The SA scheme was established in 1977 and is now administered under the state's Environment Protection Act 1993. In 2011, the NT introduced a CDS under the Environment Protection (Beverage Containers and Plastic Bags) Act 2011. The SA and NT schemes follow the same design. Both schemes place a 10-cent refund on eligible beverage containers returned to collection points. Drink manufacturers are required to have a waste management plan for their containers. In practice, this requirement is met by manufacturers joining a 'supercollector', which runs a collection scheme on behalf of its member companies.

In NSW, the scheme commenced on 1 December 2017 and provides that anyone who returns an empty eligible beverage container to an approved NSW collection depot or reverse vending machine will be eligible for a 10-cent refund. A network of depots and reverse vending machines will open across NSW to receive the empty containers. Beverage suppliers (manufacturer, importer, wholesaler or retailer) that bring eligible containers into NSW will be responsible for funding the refund as well as associated costs. Queensland has adopted a similar scheme to NSW.

## **v Contaminated land**

There is no federal law that deals directly with contaminated sites, although there are a number of policy documents and guidelines that have influenced state laws. For example, the National Environment Protection (Assessment of Site Contamination) Measure (Site Contamination NEPM) aims to establish a nationally consistent approach to the assessment of site contamination. It provides guidance on determining whether contamination poses an actual or potential risk to human health and the environment, either on or off-site, sufficient to warrant remediation, having regard to current and future land uses.

While the Site Contamination NEPM is used by environmental consultants as a national standard, each state and territory in Australia regulates contaminated land independently. Western Australia and NSW are the only states that have legislation specifically relating to contaminated land, while the remainder of Australia's states and territories regulate the issue in more general environmental protection and management acts and in subordinate legislation.<sup>32</sup> In addition, the NSW Environment Protection Authority released the Contaminated Land Management Compliance Statement in July 2018. It sets out how the EPA can ensure those responsible for managing and remediating significantly contaminated land can comply with their legal obligations to achieve improved environmental and human health outcomes.

Although different definitions are adopted, contamination is broadly described as 'a condition of land or water where any chemical substance or waste has been added at above background level and represents, or potentially represents, an adverse health or environmental impact'. Several states in Australia, including NSW, Western Australia, Victoria, Queensland and Tasmania, have a contamination register that the public can search for sites with known contamination. In general, these registers are not exhaustive. If a site is not listed in a register, this cannot be relied upon as conclusive evidence that the site is not contaminated, and conversely, nor will listing a site in the register automatically satisfy disclosure obligations.

Responsibility of persons for the clean-up and remediation of contaminated land is expressed differently in each jurisdiction but will ordinarily start with the person causing the contamination and then cascade down to owners or occupiers of contaminated sites. In NSW, in determining the appropriate person to serve with a management order, the EPA is, 'as far as practicable', to specify a person who is responsible for the contamination over the owner of the land or the notional owner of the land (such as a mortgagee in possession).

A similar principle applies in Western Australia, where the legislation establishes a hierarchy for determining responsibility of remediation, and allows for the transfer of that

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32 The Contaminated Land Management Act 1997 (NSW); the Environment Protection Act 1970 (Vic); the Environmental Protection Act 1994 (Qld); the Contaminated Sites Act 2003 (WA); the Environment Protection Act 1993 (SA); the Environmental Management and Pollution Control Act 1994 (Tas); the Environment Protection Act 1997 (ACT); and the Waste Management and Pollution Control Act 1999 (NT).

responsibility. In addition, in Western Australia, if an owner or occupier has changed or proposes to change the use of all or part of the land, the owner or occupier will be liable for remediation of that land to the extent that the remediation is required because of the change. To the extent that remediation is required because of the change of use, the person who caused or contributed to the contamination, as well as the state, is released from any liability he or she may otherwise have had.

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

Where contaminated land is being transacted, it is prudent to conduct investigations for potential contamination. In Western Australia, any transaction that will involve the sale, lease or mortgage of a site that has been classified as contaminated or possibly contaminated under the relevant legislation must include formal disclosure of the contamination at least 14 days before completion.

It is possible to provide contractually that the buyer accepts and undertakes clean-up requirements in some states. In Western Australia, responsibility for clean-up can be transferred with a written agreement and with the approval of the Department of Environment and Conservation. Similarly, in SA and Tasmania, responsibility can be transferred to a purchaser if appropriate notices have been provided to the respective environment protection authorities. Conversely, in NSW for example, a contract cannot operate to transfer statutory liability for contamination under the Contaminated Land Management Act 1997, although indemnities can still provide contractual protection where appropriately drafted.

In our experience, a purchaser will only take on contractual responsibility for contamination for which it is not responsible if it has confirmed the level of contamination (if any) and has been compensated appropriately for taking on that liability (whether by direct payment or by adjustment of the purchase price).

## **VII CLIMATE CHANGE**

Australia is a party to the United Nations Framework Convention on Climate Change and its Kyoto Protocol, and in November 2016 ratified the Paris Agreement. Australia has submitted a Nationally Determined Contribution (NDC) that commits Australia to reducing its GHG emissions to between 26 to 28 per cent below 2005 levels.

The policy measures intended to achieve this commitment include:

- a* the Australian Emissions Reduction Fund (ERF);
- b* the Safeguard Mechanism;
- c* the Renewable Energy Target;
- d* energy productivity measures; and
- e* fuel standards.

Under the ERF, eligible carbon abatement projects developed under the Carbon Credits (Carbon Farming Initiative) Act 2011 (Cth) are able to generate Australian carbon credit units (ACCUs), for purchase by the Clean Energy Regulator through periodic reverse auctions or

other competitive tendering processes. The federal government has pledged A\$2.55 billion to fund the purchase of ACCUs through the ERF. As of December 2018, there have been eight auctions of ACCUs and the majority of the funding has now been committed.

The National Greenhouse and Energy Reporting Act 2007 (Cth) requires reporting on GHG emissions, energy production and energy consumption. In 2016, the federal government amended this Act to introduce the Safeguard Mechanism, which is designed to ensure that emissions reductions paid for through the ERF are not displaced by a significant increase in emissions elsewhere in the economy. The Safeguard Mechanism requires facilities whose net scope 1 emissions exceed the safeguard threshold of 100,000 tonnes of CO<sub>2</sub>e to keep their GHG emissions at or below a set baseline based upon historical calculations.

Australia has also adopted a renewable energy target of over 23 per cent renewable energy by 2020, which is administered through the Renewable Energy (Electricity) Act 2000 (Cth). Finally, in December 2016 the federal government announced that it would look to introduce more stringent fuel standards in an attempt to bring Australian standards into line with those in Europe and to achieve Australia's NDC goals. These draft standards were the subject of public consultation in 2017 and a draft regulation impact statement was released in March 2018. Discussions are still ongoing following the consultation.

A number of Australian states and territories have also adopted strong positions on renewable energy and climate change. The NSW Renewable Energy Action Plan sets out the framework for NSW to achieve its goal of net-zero emissions by 2050, and the NSW Climate Change Policy Framework sets out other key policy initiatives for NSW, including the establishment of a climate change fund. In June 2016, Victoria committed to renewable energy targets of 25 per cent by 2020 and 40 per cent by 2025 and, in November 2016, the Victorian government proposed amendments to the Climate Change Act 2010, which include a 2050 net-zero emissions target, as well as requiring Adaptation Action Plans for systems vulnerable to climate change impacts. SA has renewable energy targets of 33 per cent by 2020 and 50 per cent by 2025 and also has a net-zero emissions target for 2050, which is set out in its Climate Change Strategy 2015. In Queensland, the renewable energy target is 33 per cent by 2030 and has adopted a net-zero emissions target by 2050, while the ACT has set a goal of 100 per cent renewable energy by 2020 under its Climate Change and Greenhouse Gas Reduction Act 2010 and also has a net-zero emissions target by 2045.

## **VIII OUTLOOK AND CONCLUSIONS**

While many Australian states and territories are leading with decisive action on climate change and renewable energy, action at the federal level has stalled. The government's signature energy policy, the National Energy Guarantee, has seen its emissions component dropped and, with GHG emissions continuing to increase, it is unclear how Australia will be able to meet its Paris Agreement commitments. A federal election is due before May 2019, and climate change and energy will be critical issues in the election, with the opposition already signalling significant changes to increase renewable energy targets and raise the level of ambition for GHG emission reduction targets.

# BRAZIL

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## I INTRODUCTION

Brazil has a vast set of environmental laws regulating activities of project developers. This special care for the environment is owing to the fact that the environment in Brazil is considered to be as a common asset, essential for good quality of life. The Federal Constitution of 1988, Article 225, mandates society to maintain an environment conducive to the healthy life of this and future generations. With the sustainable development principle in mind, project developers must respect the environmental laws and treaties in force in Brazil, under sanctions of criminal and administrative liability, notwithstanding the obligation to repair or indemnify the environmental damage caused.

One of the most important and most used mechanisms to achieve sustainable development is the environmental licensing of polluting or potentially polluting activities. The issuance of an environmental licence is mandatory for the construction, installation, enlargement, modification and operation of potentially polluting activities or facilities. Licences are always valid for a specific term and their effectiveness depends on compliance with the technical conditions previously established, which may vary according to the activity and the facility.

## II LEGISLATIVE FRAMEWORK

The Federal Constitution, enacted in 1988, has followed the guidelines established by the National Environmental Policy, outlined in Federal Law No. 6,938/81. The National Environmental Policy aims to preserve, improve and recover the environmental quality conducive to life, aiming to ensure the conditions for socio-economic development, the interests of national security and the protection of the dignity of human life. Also worth mentioning are Federal Law No. 9,605/1998, which provides for criminal and administrative sanctions derived from conducts and activities harmful to the environment, and Federal Decree No. 6,514/2008, which provides for administrative infractions and sanctions for the environment and establishes the federal administrative process for the determination of these infractions. States that do not have their own standard for the determination of infractions and sanctions use the federal regulation in a subsidiary manner.

Another important piece of legislation is Federal Law No. 12,651/2012, which establishes the Brazilian Forestry Code. This Law provides general rules on vegetation

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protection, specially protected areas (such as Permanent Preservation Areas and Legal Reserve Areas), forest exploitation, supply of forest raw material, control of the origin of forest products, and control and prevention of forest fires, and also provides economic and financial instruments to achieve its preservation objectives.

Regarding specially protected areas, Federal Law No. 9,985/2000 established the National System of Nature Conservation Units and set criteria and rules for the creation, implementation and management of these conservation units. The proposal, implementation, management, protection, supervision and monitoring of federal conservation units is a duty of the Chico Mendes Institute of Biodiversity Conservation. Other national policy acts, such as the National Water Resources Policy (Federal Law No. 9,433/1997), the National Policy on Solid Waste (Federal Law No. 12,305/2010), the National Policy on Climate Change (Federal Law No. 12,187/2009), the Regulatory Framework on Biodiversity (Federal Law No. 13,123/2015, regulated by Federal Decree No. 8,772/2016) and the National Biofuels Policy (Federal Law No. 13,576/2017) are also important and will be further discussed below.

### **III THE REGULATORS**

According to Supplementary Law No. 140/2011, the environmental agency entitled to issue licences will also be responsible for inspection, supervision and application of administrative penalties. The Supplementary Law also establishes that the federal environmental agency, the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA), has the authority to conduct environmental licensing proceedings in a number of cases described therein, such as offshore activities and nuclear power plants, among many others, and is also responsible for the inspection and sanctioning of the environmentally harmful aspects of these activities or those that violate environmental laws. Municipal environmental agencies have jurisdiction to license facilities and activities limited to producing local impacts that may occur within the municipalities. Therefore, state environmental agencies have general jurisdiction over the environmental licensing of facilities and activities not encompassed by federal or municipal jurisdictions. Supplementary Law No. 140/2011 was later regulated by Federal Decree No. 8,437/2015, which introduced additional types of activities and facilities for which the environmental licensing will be conducted by IBAMA.

The environmental licensing proceeding in Brazil, whenever the project affects indigenous areas, may also involve the participation of the National Indigenous Foundation. Respectively, the National Historic and Artistic Heritage Institute may be involved when archaeological or cultural assets are affected and the Palmares Cultural Foundation may be consulted when maroon communities are affected.

Regarding water resources considered as being of federal scope, the National Water Agency (ANA) is responsible for issuing grants for the use of water resources and for ensuring the correct use and maintenance of quality of federal water resources. In addition to the environmental agencies, federal and state public prosecutor's offices have a prominent role in the development of environmental matters, overseeing compliance with legislation by means of civil investigations, public class actions and criminal lawsuits.

## **IV ENFORCEMENT**

Any incident or violation of environmental laws may potentially give rise to civil, administrative and criminal liabilities. The federal and state public prosecutor's offices are the main (in the case of criminal lawsuits, they are the only) entities with standing to file lawsuits to secure the environment or restore environmental damage. In this regard, a public civil action is the lawsuit used in the civil sphere to force individuals and legal entities (companies and even environmental agencies, in the case of omission as to the duty to supervise) to compensate or remediate damage caused to the environment and third parties, regardless of the existence of fault. Despite the majority action of the federal and state public prosecutor's offices in these cases, Federal Law No. 7,347/1985, or the Public Civil Action Law, lists several entities with standing to file public civil actions. Directors and officers of a company that caused environmental damage may be held civilly liable when acting with proven negligence or wilful misconduct, and when they were also shareholders. Aesthetic harm to public assets is also considered environmental damage.

Indemnification (or compensation) and repair of environmental damage are distinct concepts, but both are applicable to the mitigation of environmental damage. Repair is understood as the act of recovering the environment to its original state, prior to the damage. Indemnifying is the act of financially compensating a harm, when the damage is such that the environment cannot be recovered to its original state. The fact that a wrongdoer's activity is permitted by an environmental licence does not exclude the obligation to repair or compensate damage, that is, the lawfulness of the activity does not preclude the right of legitimate parties to request indemnification or compensation. According to a well-established trend in Brazilian case law and mainstream literature, the compensation or indemnification of an environmental damage is not subject to statutes of limitation. Also, according to Federal Law No. 9,605/1998, the piercing of the corporate veil will be admitted whenever the corporate entity becomes an obstacle to the recovery of environmental damages, including (but not limited to) when its financial incapacity for such recovery is proven.

In the criminal sphere, the entity with standing to file a criminal lawsuit for environmental violations is the public prosecutor's office, federal or state. The applicable penalties shall be related to restricting rights, such as temporary suspension of rights, partial or total suspension of activities, and it can also lead to fines and prohibitions on executing contracts with government as well as fines for legal entities, detention or imprisonment for individuals, among others. Officers, directors, managers or agents of a legal entity may be subject to criminal penalties, such as confinement or imprisonment. However, case law has also established that solely the condition of being a director or officer does not by itself authorise the initiation of an environmental criminal investigation, as an element of wilful misconduct or gross negligence is necessary.

The administrative liability regime establishes that an action or omission may be punishable. At the administrative level, the environmental agencies responsible for the licensing of the activity are also responsible for sanctions applied for non-compliance with environmental legislation; however, in practice, despite the regime implemented by Supplementary Law No. 140/2011, to date, there are still several cases of one environmental agency interfering with the other's jurisdiction. The possible penalties for administrative infractions are: warnings; fines (in the federal level, ranging from 50 up to 50 million reais); suspension of sale and manufacture of products; and partial or total suspension of activities, among others. The administrative infractions on the federal level are discussed in Federal Law No. 6,514/2008; as mentioned in Section II. Unlike the civil liability regime, which provides



for strict, joint and several liability, an element of negligence or wrongful misconduct is essential to configure a criminal or administrative violation, although some state courts and environmental agencies remain wrongfully applying the civil liability regime to administrative infractions. Nonetheless, the Brazilian Superior Court of Justice has already determined that intent or gross negligence are required to trigger administrative liability.

Over the past few years, we have noticed the need for specialisation in the many peculiarities of litigation issues applicable to environmental matters. We came to acknowledge that experience in leading and complex cases usually grants lawyers the expertise to support their clients with specifically tailored services according to their needs. As environmental issues are unique and dynamic, an understanding of traditional dispute resolution matters is not enough to assist clients in connection with their businesses. Court trends are repeatedly pointing out that formal issues are not as important as they used to be, which is the reason any conflict resolution must take into consideration the material grounds of the case (merit).

Finally, we foresee that environmental litigation will evolve in Brazil as a more efficient system of conflict resolution is developed, mainly for those cases involving multiple stakeholders – either as claimants or defendants. In many cases, the Public Action Law, established in 1985, has not been shown as an effective legal remedy to address certain environmental complex conflicts. Thus, alternative methods such as mediation shall be taken into consideration by the competent authorities (prosecutors and judges) to address complex social, economic and environmental matters.

## **V REPORTING AND DISCLOSURE**

In the federal sphere, there is no obligation established in the law that requires the immediate communication to an environmental agency on environmental violations. Nevertheless, it is usually recommended to inform the existence of any damage or violation, as cooperation with the environmental agency is considered as an extenuating circumstance in the application of criminal or administrative sanctions. Federal Law No. 9,605/1998 establishes that the cooperation with the agents in charge of environmental monitoring and control should mitigate the administrative penalty and the penalty imposed in criminal matters. Nevertheless, in cases of oil spills, entrepreneurs are obliged to immediately inform the competent authorities. In addition, pursuant to National Council for the Environment (CONAMA) Resolution No. 420/2009, the existence of risks to human health by means of a contaminated area obliges entrepreneurs to inform legitimate authorities.

Although not nationally consolidated, in the state of São Paulo, for instance, State Decree No. 59,263/2013, which provides guidelines and procedures for the protection of soil quality and the management of contaminated areas, provides that, from the moment that evidence or suspicions of contamination are identified, legal representatives must immediately notify the state environmental agency and the municipality responsible, which must express its opinion on the need to stop activities in progress and require the completion of a confirmatory investigation. Nevertheless, there is no way of easing the obligation to repair or compensate environmental damage caused in this matter, nor is there any kind of amnesty for whistle-blowers.

## **VI ENVIRONMENTAL PROTECTION**

### **i Air quality**

Air quality standards in Brazil are regulated by CONAMA, by means of CONAMA Resolution No. 491/2018. Air quality standards are concentrations of atmospheric pollutants, which, if exceeded, could affect the health, safety and well-being of the population, as well as damage flora and fauna, materials and the environment in general. The Resolution does not specify the limits of air pollution to each activity individually, adopting general standards widely applied. Nevertheless, states are allowed and encouraged to enact their own regulations to impose standards on air emissions. According to Federal Law No. 9,605/1998, the act of causing atmospheric pollution at levels that result or may result in damage to human health, or that cause the death of animals or significant destruction of flora, may result in imprisonment from one to four years and a fine. If air pollution causes the reallocation, even momentary, of inhabitants of an affected area, penalty is imprisonment from one to five years and a fine.

In the scope of the administrative liability regime, Federal Decree No. 6,514/2008 provides that the act of causing atmospheric pollution is subject to a fine ranging from 5,000 to 50 million reais. The control of air emissions is provided as a technical requirement in environmental licensing. Therefore, if the level of emissions exceeds the standard established in the licence, the wrongdoer may be subject to administrative penalties for non-compliance with conditions established in the environmental licence, such as warnings, fines ranging from 500 to 10 million reais and an even embargo on the activity, depending on the seriousness of the infraction.

### **ii Water quality**

Federal Law No. 9,433/1997, which established the National Policy on Water Resources, establishes that the use of water resources is subject to the granting of the right of use, either for the extraction from a water body (even for human consumption), or for the discharge of effluents. The issuance of the right to use water resources is defined based on the dominance of the water resource used, being performed by federal or state entities. Federal water resources are lakes, rivers and any streams of water on land in their domain, or that span more than one state, serve as boundaries with other countries, or extend to or from foreign land, as well as marginal lands and river beaches. In these cases, the authority to issue the grant is ANA. The water quality is also disposed by CONAMA Resolutions Nos. 357/2005 and 430/2011, rules that provide the classification of water bodies and environmental guidelines for its framework, as well as establish conditions and standards for effluent discharge on water resources. According to the National Policy on Water Resources, the execution of hydraulic works and services, derivation or use of water resources of domain or administration of the Federal Union without the respective grant of the right to use water resources is considered an administrative violation. Such conduct entails the application of penalties, including warnings, fines ranging from 100 to 10,000 reais, in addition to temporary or definitive embargoes.

### **iii Chemicals**

According to IBAMA Normative Instruction No. 05/2012, maritime and interstate highway transport activity of dangerous products depends on the issuance of an environmental authorisation for the transport of dangerous products, issued by IBAMA. This means that maritime transportation and interstate transportation (by land and river) of dangerous products must be followed by this document.

In addition, individuals or entities that develop the activity within the boundaries of one unit of the Federation must follow the licensing or environmental authorisation rules for the transportation of dangerous products established by the respective state environmental agency. In other words, states are also entitled to impose their own regulations on the usage and transportation of chemical and dangerous products. Moreover, depending on the material or substance, the army or the police may also issue authorisations for the production, storage, handling, purchase, transportation and sale of dangerous products.

According to Federal Decree No. 6,514/2008, producing, processing, packaging, importing, exporting, marketing, supplying, transporting, storing or using a product or substance that is toxic, dangerous or harmful to human health or the environment, without complying with the requirements established by laws or regulations, can lead to fines ranging from 500 to 2 million reais.

#### **iv Solid and hazardous waste**

The National Policy on Solid Waste, established by Federal Law 12,305/2010, aims to set principles, instruments, guidelines, goals and actions to enable the integrated management of waste, except radioactive waste, which is regulated by specific legislation. The concept of waste management follows the order of priority of non-generation, reduction, reuse, recycling, treatment and environmentally appropriate disposal. One who generates waste in its industrial process is therefore responsible for its segregation, storage, transportation and final disposal, and may be required to repair any kind of environmental damage therein related. By means of the concept of shared responsibility, instituted by the National Policy on Solid Waste, tasks and costs involved in the different stages of solid waste management are distributed throughout the production chain to the extent of liability of each of the parties involved. Therefore, although the liability for repairing damage to the environment in the civil sphere is joint and several, which means regardless of factual fault, management of waste also observes this distribution of burden among its product chain.

By means of the civil liability regime, hiring third parties to perform any of the phases of solid waste management, such as the environmentally appropriate final disposal, does not exempt the contractor from being held liable to repair or indemnify for environmental damage. The same imposes a reverse logistics system, which consists of an instrument characterised by a set of actions, procedures and means to enable the collection and restitution of solid waste to the business sector, for reuse, in their cycle or other productive cycles, or other environmentally appropriate disposal. The reverse logistics system applies to manufacturers, importers, distributors and traders of pesticides, batteries, tires, lubricating oils, packaging, lamps and electronic products. Therefore, these agents are obliged to structure and implement mechanisms to return the residues of these products after their use by consumers for reuse in the production process or other environmentally appropriate disposal. In the same vein, the Brazilian government enacted Federal Decree No. 9,177/2017, a rule that specifically enhances this already-existing compulsory reverse logistics system, in accordance with the National Policy on Solid Waste, and specific rules for key sectors, such as pharmaceuticals, are currently being discussed.

According to Federal Decree No. 6,514/2008, anyone who causes pollution by means of improper waste management may be subject to a fine of up to 50 million reais. In the criminal sphere, according to Federal Law No. 9,605/1998, one who causes pollution may

be subject to imprisonment from one to four years. All of these penalties (both administrative and criminal) may be applied regardless of the obligation to repair any environmental damage in the civil sphere.

#### **v Contaminated land**

Contamination of soil and groundwater triggers environmental liabilities and, as already highlighted above, any legal claim for reparation or indemnification of environmental damage is not subject to any statutes of limitation. Contaminated areas are classified as areas where there is evidence of pollution caused by disposal, accumulation, storage or infiltration of substances or residues, implying negative impacts on soil or groundwater. The detection of contamination requires actions by governmental agents, entities that caused contamination and previous or current owners. In this regard, corrective measures should be applied in order to establish levels of quality compatible with a certain future use (i.e., residential, commercial or industrial uses). At the federal level, CONAMA Resolution No. 420/2009 provides criteria and guiding values of soil quality for the presence of chemical substances and establishes guidelines for the management of contaminated areas as a result of human activities.

According to Brazilian environmental legislation, the owner and possessor of a contaminated site may, regardless of fault, be held liable and compelled to perform the remediation and recovery of the environment. In other words, environmental liability for contaminated areas follows the general rule in which one may be held liable regardless of fault (joint and several liability regime), besides being a *propter rem* obligation (attached to the property). Parties can contractually allocate such liability by means of private agreements, but contractual provision does not affect their liability in relation to public authorities on public civil actions. Nevertheless, private contracts can only direct the discussions on the right of redress among them.

As stated previously, causing pollution of any kind that results or may result in damage to human health by means of a contaminated area is considered an administrative violation punishable by fines of up to 50 million reais in the administrative sphere, notwithstanding the criminal liability in which individuals may be imprisoned from one to four years. All of these penalties (both administrative and criminal) may be applied regardless of the obligation to repair any environmental damage in the civil sphere.

## **VII CLIMATE CHANGE**

Brazil is a party to the UN Framework Convention on Climate Change (UNFCCC) and is also a signatory to the UNFCCC International Climate Change Agreement (Paris Agreement), which was signed by Brazil in December 2015, ratified in September 2016 and recently transformed into a federal law by means of Federal Decree No. 9,073/2017. For this reason, Brazil is therefore obliged to comply with the goals that the local government proposed in the Agreement (nationally determined contributions (NDCs)), such as reducing greenhouse gas (GHG) emissions by 37 per cent below 2005 levels by 2025. To achieve these goals, Brazil committed itself to increase the share of sustainable biofuels in the local energy mix to approximately 18 per cent by 2030 (and, at the same time, to achieve a total amount of 45 per cent of renewables in the same energy mix) and also restore and reforest 12 million hectares of forests.

Focusing on the importance of biofuels to attaining the Paris Agreement goals, in December 2017, Federal Law No. 13,576/2017 was published. The Law institutes the National

Biofuels Policy, *RenovaBio*, establishing principles, objectives, rationales and instruments. It also contemplates the Biofuels Certification, goals for reduction of GHG emissions for the fuel sector, and issuance and negotiation of decarbonisation credits. Subsequently, in June 2018, the National Energy Policy Council published Resolution No. 05/2018, setting the annual mandatory goals for reduction of GHG emissions in the fuel sector for the following 10 years (2018 to 2028).

While the Kyoto Protocol was still valid, Brazil performed a leading role in the trading of allowances derived from clean development mechanisms, registering more than 2,500 projects during that period and also enacted its own National Policy on Climate Change (Law No. 12,187/2009), national main legislation that has established a voluntary commitment to achieve a GHG emissions reduction of between 36.1 and 38.9 per cent by 2020 (however, such commitment shall be reviewed because of the new goals set for Brazil in the Paris Agreement). Several Brazilian states have also enacted their own state policies. Markets in the trade of carbon allowances within the country are in operation; however, at present these are just minor initiatives. The Paris Agreement is expected to boost initiatives from public authorities, expand local markets, stimulate mitigation and adaptation measures, and relevant private and public funding mechanisms.

The next steps taken by the country to tackle climate change will depend on the recently elected federal government, with a new president and Congress for the 2019 to 2022 quadrennial. In any case, owing to the goals that Brazil committed to achieve in the Paris Agreement, biofuels, deforestation and land use activities, such as agriculture, are a key focus for actions to be developed by Brazil to satisfy its GHG reduction targets.

## **VIII OUTLOOK AND CONCLUSIONS**

In recent years, the following developments have progressed in Brazilian environmental law:

- a* the National Policy on Climate Change in 2009, which established, as a voluntary commitment, the goal to achieve a GHG emissions reduction of between 36.1 and 38.9 per cent by 2020 – and shall be reviewed owing to the Paris Agreement and Brazil's NDCs;
- b* the National Solid Waste Policy in 2010, which imposed the shared responsibility regime and provided take-back obligations;
- c* the Forestry Code in 2012, which established a new regime for specially protected areas, being implemented by means of a new online registry bound to cover all rural property in Brazil;
- d* the Biodiversity Law in 2015, which set out rules for the protection of, and access to, genetic heritage and associated traditional knowledge for the purpose of technological research and development, and provides for the sharing of benefits resulting from the economic exploitation of products or reproductive materials derived from that access;
- e* the National Biofuels Policy, which sets the grounds for the increase of biofuels in the energy mix and goals for reduction of GHG emissions in the fuel sector; and
- f* Federal Decree No. 9,179/2017, which amends Federal Decree No. 6,514/2008 and provides for the Environmental Fines Conversion Programme, aiming to convert fines imposed by the federal environmental agency into services of preservation, improvement and recovery of the quality of the environment.

With special reference to the New Forestry Code, in February 2018, the Brazilian Supreme Court ruled on five lawsuits that challenged the constitutionality of several of its provisions. Except for a few expressions deemed unconstitutional, the Court held that most of those provisions were constitutional and determined the interpretation to be adopted of some of them, putting an end to a long-lasting debate.

In addition to the implementation of the legislation mentioned above, we foresee the following trends in the forthcoming years:

- a* policies, measures and actions to implement Brazil's NDCs will be carried out under the National Policy on Climate Change, the Forestry Code, the National Biofuels Policy, Federal Law No. 9,985/2000 and the Low Carbon Agriculture Programme;
- b* the introduction of more market-based instruments in policymaking as an alternative to a command-and-control approach towards compliance with environmental regulations or initiatives to foster bio-economy and private investments or finance in green projects;
- c* a pending bill, which was thoroughly discussed in 2017 and has recently caught political and media attention, to create an environmental licensing law, as certain local stakeholders argue that the environmental licensing process is very time-consuming and its slowness hinders, or at least inflates, the costs of infrastructure investment;
- d* inclusion of social aspects on environmental licensing (social licence), specifically on indigenous and traditional communities rights; and
- e* a rise in environmental litigation cases, pushed by the public prosecutor's offices and environmental authorities on solid waste, contaminated lands, licensing, forestry and climate change issues.

# CANADA

*Jonathan Cocker*<sup>1</sup>

## I INTRODUCTION

With a Canadian federal election in 2019, there is pressure on the government to be seen as successful in implementing its ambitious environmental agenda. While Canada's environmental regulation continues to move towards further integration with international standards, following the new United States–Mexico–Canada Agreement, there are hopes that these parties will work together towards closer harmonisation on environmental policy.

Climate change is at the centre of federal environmental policy. The controversial national minimum carbon price has been recast federally as a 'carbon fee and dividend', with the federal government publicly distributing 'rebates' to residents of provinces refusing to implement a price on carbon. Whatever form the carbon tax ultimately takes, climate change policy now extends to energy policy more generally, as well as transportation, infrastructure and resource management. It remains to be seen how many of these goals will be frustrated by assertions of provincial and territorial jurisdiction in key areas of federal strategy.<sup>2</sup>

## II LEGISLATIVE FRAMEWORK

### i Federal legislation

The Canadian federal government and the provincial or territorial governments both have jurisdiction over areas of environmental protection based on the division of powers under the Canadian Constitution. As such, there is often an overlap, if not contesting claims of legislative authority, between federal and provincial or territorial regulators.

The central piece of federal legislation regulating the environment is the Canadian Environmental Protection Act (CEPA), providing for, among other things, intergovernmental cooperation and cradle-to-grave (from beginning to end of the life cycle) regulation of toxic substances. Under CEPA, the Minister of the Environment and Climate Change may enter into equivalency agreements with the provincial, territorial and aboriginal governments, exempting them from the application of CEPA, thereby further splintering environmental regulation in Canada. Further, the government recently released the report of its review of CEPA, which recommended a number of changes to the legislation.<sup>3</sup>

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1 Jonathan Cocker is a partner at Baker McKenzie. Special thanks to my assistant Kimberley Graham at Baker McKenzie, for assisting with the research and writing of this chapter.

2 For instance, the Federal Court of Appeal dismissed a jurisdictional challenge to the Federal Renewable Fuels Regulations from oil sands producer Syncrude, *Syncrude Canada Ltd v. Canada*, 2016, FCA 160.

3 Canada, Parliament of Canada Standing Committee on Environment and Sustainable Development, 'Healthy Environment, Healthy Canadians, Healthy Economy: Strengthening the Canadian Environmental

Other federal statutes that deal with specialised environmental matters include the Fisheries Act, the Canadian Environmental Assessment Act, the Arctic Waters Pollution Prevention Act, the Canada Shipping Act 2001, the Pest Control Products Act and the Transportation of Dangerous Goods Act 1992.

## **ii Provincial or territorial legislation**

Each Canadian province and territory also has its own environmental legislation, regulating day-to-day environmental management. In Ontario, the Environmental Protection Act (Ontario EPA) regulates the environmental quality of air, soil, sediment, groundwater, sewage, certain target hazardous substances, regulated waste streams, waste management systems and some areas of waste diversion, along with reporting requirements and penalties for failure to comply with the EPA. Other provincial statutory areas of environmental regulation include provincial and territorial environment assessments, waterbodies, drinking water, pesticides, nutrient management, renewable energy and climate change.

## **iii International agreements**

Canada's international commitment to protection of the environment and minimisation of climate change currently emanates from the United Nations Framework Convention on Climate Change (the Paris Agreement), an agreement that requires all parties to commit to 'nationally determined contributions' and report on emissions and agreement implementation plans.<sup>4</sup> Canada is also a party to the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants with a number of other nations, which is a voluntary initiative aimed at protecting the environment and public health and addressing climate change.<sup>5</sup> Additionally, Canada is party to numerous bilateral and multilateral environmental agreements with nations around the globe.<sup>6</sup>

# **III THE REGULATORS**

## **i Federal**

Environment and Climate Change Canada (ECCC) regulates and enforces rules with respect to environment with a publicly stated mandate to:

- a* preserve and enhance the quality of the natural environment, including water, air, soil, flora and fauna;
- b* conserve Canada's renewable resources;
- c* conserve and protect Canada's water resources;
- d* enforce rules relating to boundary waters; and

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Protection Act, 1999', online: [www.ourcommons.ca/DocumentViewer/en/42-1/ENVI/report-8](http://www.ourcommons.ca/DocumentViewer/en/42-1/ENVI/report-8).

4 United Nations Framework Convention on Climate Change, 'The Paris Agreement' (22 November 2017), online: [http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php).

5 Canada, [climatechange.gc.ca](http://climatechange.gc.ca), 'Climate and Clean Air Coalition (CCAC) to Reduce Short-Lived Climate Pollutants (SLCPs) (mod. 27 November 2015), online: [www.climatechange.gc.ca/default.asp?lang=En&n=7F771E4A-1](http://www.climatechange.gc.ca/default.asp?lang=En&n=7F771E4A-1).

6 See list of Canada's environmental agreements: Canada, Environment and Climate Change Canada, Engagements in International Environmental Agreements (mod. 9 November 2017), online: [www.ec.gc.ca/international/default.asp?lang=En&n=0E5CED79-1](http://www.ec.gc.ca/international/default.asp?lang=En&n=0E5CED79-1).



e coordinate environmental policies and programmes for the federal government.<sup>7</sup>

In addition to the ECCC, the Ministry of Fisheries and Oceans oversees the Fisheries Act and the Oceans Act, and the Ministry of Transportation oversees the Transportation of Dangerous Goods Act 1992.

## **ii Provincial and territorial**

Provinces and territories have regulators similar to the ECCC. For example, in Ontario, the Ministry of Environment and Climate Change administers certain pieces of legislation with respect to environment and climate change, including: the Clean Water Act, the Ontario EPA, the Safe Drinking Water Act, the Toxics Reduction Act and the Resource Recovery and Circular Economy Act (RRCEA).

## **iii Courts**

Courts in Canada play an important role in enforcing laws as they exercise appellate and review powers over administrative environmental decision-making. In some provinces, the environmental protection legislation expressly mandates the courts to determine liability and apportion damage for environmental harm, though most environmental protection issues are determined, at first instance, by specialised environmental administrative tribunals. For example, the Ontario Environmental Review Tribunal resolves applications and appeals under the Ontario EPA and the British Columbia Environmental Appeal Board hears appeals of decisions of government officials under the Environmental Management Act (an act similar to the Ontario EPA).

# **IV ENFORCEMENT**

## **i General enforcement and compliance**

### ***Federal enforcement***

Breaches of CEPA include the unauthorised importation of chemicals into Canada, ocean dumping and international air pollution.<sup>8</sup> Offences under CEPA are quasi-criminal and carry with them heavy fines or imprisonment terms. Penalties for failure to comply with the terms of an authorisation or direction include a fine of up to C\$1 million or imprisonment of up to three years, or both.<sup>9</sup> For example, in 2015 a company was ordered to pay C\$375,000 after pleading guilty to offences under CEPA, the Fisheries Act and the Environmental Emergency Regulations relating to the spill of chemicals into the environment and water frequented by fish.<sup>10</sup>

There are two enforcement categories under CEPA: inspection and investigation. If, during the course of an inspection, it is determined that a provision under CEPA has not been complied with, the inspector may issue a warning, ticket, direction, ministerial

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7 Canada, Environment and Climate Change Canada, About Environment and Climate Change Canada, (mod. 12 December 2016), online: [www.ec.gc.ca/default.asp?lang=En&n=BD3CE](http://www.ec.gc.ca/default.asp?lang=En&n=BD3CE).

8 *ibid.*, at 2 (Environmental Management in Canada).

9 Canadian Environmental Protection Act, SC 1999, c 33, at Section 272.1 [CEPA].

10 Environment and Climate Change Canada, 'Spill results in \$375,000 penalty for Panther Industries (Alberta) Inc.' (29 July 2015), online: [www.ec.gc.ca/alef-ewe/default.asp?lang=En&n=417E42E2-1](http://www.ec.gc.ca/alef-ewe/default.asp?lang=En&n=417E42E2-1).

order or injunction, depending on the severity of the violation. An investigation involves the gathering of information from a number of sources and may include, where necessary, obtaining a search warrant.

The two most significant corrective measures under CEPA are environmental protection alternative measures, which are negotiated settlements, and environmental protection compliance orders. Offenders may also receive hefty financial ‘administrative monetary penalty orders’, which may be awarded in addition to prosecutions for the same offence.<sup>11</sup>

### ***Provincial and territorial enforcement***

At the provincial or territorial level, the consequences for failure to report a violation of either environmental law or the terms of an environmental approval or licence can be severe. In Ontario, for instance, generally every person who contravenes the Ontario EPA is guilty of an offence and can be liable, for each day or part of a day that the offence occurs or continues, for a fine of up to C\$50,000 on a first conviction and, on each subsequent conviction, for a fine of up to C\$100,000, imprisonment for a term of up to one year, or both.<sup>12</sup>

A corporation that contravenes the Ontario EPA is generally liable on conviction, for each day or part of a day on which the offence occurs or continues, to a fine of not more than C\$250,000 on a first conviction and not more than C\$500,000 on each subsequent conviction.<sup>13</sup> The trend in the provinces and territories recently has been towards widening the net of environmental liability and attacking pollution offenders at the source, whether as owners or occupiers of property, owners of contaminants or, increasingly, directors and officers of the polluting corporation. The Ontario Court of Appeal has held the City of Kawartha Lakes responsible for a fuel spill that migrated from an adjacent property, in spite of its innocence (as it was neither a polluter nor an occupant).<sup>14</sup> Conversely, in British Columbia, the principle of polluter pays was strictly applied to hold a historical owner liable for the pollution of land.<sup>15</sup> British Columbia has also recently implemented new spill response regulations that impose reporting, recovery and response obligations on ‘responsible persons’.<sup>16</sup>

### **ii Environmental torts**

In addition to administrative sanctions, civil cases under the common law of toxic torts may be brought where a party has suffered environmental harm. Toxic tort<sup>17</sup> cases in Canada fall into two categories: generic causation and specific causation. In order to be successful in a claim for damages for a toxic tort, the plaintiff must prove: first, that the defendant’s

11 Environment and Climate Change Canada, ‘Policy Framework of the Administrative Monetary Penalty Regime at Environment and Climate Change Canada to Implement the Environmental Violations Administrative Monetary Penalties Act’ (24 November 2017), online: [https://www.ec.gc.ca/alef-ewel/29F33776-D3BA-4592-B1B1-0019D97872AC/APF\\_E\\_JUN12-2017%20Final%20FIP.pdf](https://www.ec.gc.ca/alef-ewel/29F33776-D3BA-4592-B1B1-0019D97872AC/APF_E_JUN12-2017%20Final%20FIP.pdf).

12 Environmental Protection Act (Ontario), RSO 1990, c E-19, at Section 182.1-182.2, 187 [EPA].

13 *ibid.*, at Section 187.

14 *Kawartha Lakes (City) v. Ontario (Environment)*, 2013 ONCA 310, at Paragraphs 19-21.

15 *JJ Properties Inc v. PPG Architectural Coatings Canada, Inc/PPF Revêtements Architecturaux Canada Inc*, 2014 BCSC 1619, at paragraph 111 (aff’d in 2015 BCCA 472).

16 Government of British Columbia ‘New Spill Response Regulations to take effect October 30, 2017’, online: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/spills-environmental-emergencies/spill-preparedness-and-response-bc>.

17 The principal torts claimed in environmental matters are nuisance; negligence; trespass; and strict liability.

substance was capable of causing the injury claimed (the generic causation); and, second, that the toxic substance actually caused the illness or damage in the specific circumstances (the specific causation).<sup>18</sup> Causation is difficult to prove in Canada as there must be evidence that the action or inaction of the defendant caused the specific damage or injury claimed by the plaintiff.

In Ontario, a fuel supplier was recently held liable in negligence for failing to conduct a legally required inspection of a fuel tank.<sup>19</sup> While the damages were reduced as a result of the plaintiff's contributory negligence, the supplier was ordered to contribute to the costs of certain remediation activities. Many environmental liability claims involve government actors. A recent decision of the Supreme Court of Canada (SCC) found that the Alberta Energy Board did not owe a duty of care to a claimant, and that instead the plaintiff should have pursued an administrative remedy.<sup>20</sup>

Class actions for environmental torts have also encountered resistance in Canadian courts. For example, the SCC in *Hollick v. Toronto (City)* held that the requirements to certify the class action were not met in a case where the plaintiffs complained of noise and physical pollution from a landfill that was owned and operated by the City of Toronto.<sup>21</sup> However, the SCC kept the door open for future class actions for toxic torts, stating that '[w]hile the appellant has not met the certification requirements here, it does not follow that those requirements could never be met in an environmental tort case.'<sup>22</sup> The Law Commission of Ontario (LCO) announced in 2017 its plan to conduct a comprehensive review of the province's class action regime. As a preliminary step in the review process, the LCO released its consultation paper on 9 March 2018 to garner feedback from the legal profession, legal organisations, governments, public and private organisations, academics and the general public. To date, the LCO received more than 20 public submissions about the current state of Ontario's class action establishment. The consultation stage ended on 31 May 2018, and the final report (still pending release) could herald changes to the regime, as well as new opportunities for toxic tort class actions.<sup>23</sup>

### iii Corporate liability

Owners and previous owners of property, occupants and previous occupants, as well as persons who have or had charge, management or control of the source of contamination, may all be within the reach of regulatory authorities. Corporations in Canada are viewed as 'persons' who are subject to the same environmental liability as any other individual.<sup>24</sup> However, the nature of environmental protection laws allows governments to avoid corporate boundaries

18 Lynda M Collins, 'Material Contribution to Risk in the Canadian Law of Toxic Tort', 91:2 Chi.-Kent. L. Rev. 567 (2016), online: [http://scholarship.kentlaw.iit.edu/cgi/viewcontent.cgi?article=4119&context=ckla\\_wreview](http://scholarship.kentlaw.iit.edu/cgi/viewcontent.cgi?article=4119&context=ckla_wreview).

19 *Gendron v. Thompson Fuels*, 2017 ONSC 4009.

20 *Ernst v. Alberta Energy Regulator*, 2017 SCC 1.

21 *Hollick v. Toronto (City)*, 2001 SCC 68, at paragraphs 36, 2.

22 *ibid.*, at paragraph 37.

23 Law Commission of Ontario, 'Class Actions', online: [www.lco-cdo.org/en/our-current-projects/class-actions/](http://www.lco-cdo.org/en/our-current-projects/class-actions/).

24 Canada Business Corporations Act, RSC, 1985, c C-14, at Section 15(1).

to hold other parties liable for environmental damage. Some environmental statutes use 'owners' and 'operators' as the categories of liable persons, including natural persons acting in concert with those owners and operators.<sup>25</sup>

One common test for environmental liability used in Canada is 'control'. The test of control is a factual one, based on an assessment of the corporation's scope of activity causing pollution. If the corporation can and should control the activity at the point where pollution occurs, migrates or otherwise creates an adverse impact, then it will be responsible for the pollution.<sup>26</sup> As a result of this test of control, parent companies may be held liable for the environmental offences of both their agents and subsidiaries; however, such a case has not been substantively considered by Canadian courts.

Generally, unless a corporate entity is used in the commission of a fraud, courts are reluctant to look beyond the corporate structure or 'pierce the corporate veil' and award damages for environmental torts. As such, a corporation will only be held responsible for the actions of a subsidiary corporation committing an environmental tort (even if that subsidiary is wholly owned by the parent) where it can be demonstrated that the parent company is an 'alter ego' for the subsidiary.<sup>27</sup>

#### iv Director liability

It is common in Canada for statutes to hold directors and officers liable when they authorise, acquiesce or participate in an environmental offence.<sup>28</sup> A director or officer who actually approves an action that is an offence, even if the action is not carried out personally, can be said to have authorised it. A failure to take action or engaging in wilful blindness or negligence, despite awareness of the commission of an offence or of an omission to act, may constitute acquiescence. A director or officer can be said to cause or permit a corporate offence if the director or officer was in a position of influence and control to prevent the commission of the offence but failed to act. How much control will result in liability is determined by a factual assessment of proximity to the activity at the point at which pollution occurs.<sup>29</sup> Further, liability will 'crystallise' at the time of pollution and may follow a director or officer long after resignation.<sup>30</sup>

The defence of due diligence is available to directors and officers for environmental liability. The defence was introduced in the 1978 case, *R v. Sault Ste. Marie*, in which the SCC created a new category of offences now known as 'strict liability' offences. Essentially, strict liability offences preserve administrative ease of proof, since *mens rea*, or the guilty mind, is not an ingredient of the offence. In other words, an accused will be found liable so long as the offence was committed, regardless of their intention. An accused may be acquitted, however, if, on the balance of probabilities, all reasonable care or due diligence was exercised to avoid the particular event giving rise to the charges.<sup>31</sup>

25 See for example: CEPA, *supra*; EPA, *supra*.

26 See, for example: *Midwest Properties Ltd. v. Thordarson*, 2015 ONCA 819, at Paragraphs 81–89.

27 CED (online), Business Corporations Ontario, 'Characteristics of a Corporation: Limited Liability; Piercing or Lifting Corporate Veil' (I.2(b).(ii) (Ontario)) at Sections 23–28.

28 See, for example: CEPA, *supra* at Section 280.1; EPA, *supra* at Section 194.

29 See, for example: *Midwest Properties Ltd v. Thordarson*, 2015 ONCA 819, at Paragraphs 81–89.

30 See: *Baker v. Ministry of Environment*, 2013 ONSC 4142, wherein the Ontario Divisional Court refused to stay an order issued by Environment Canada against former directors and officers of a corporation, meaning that they remained responsible for monitoring, reporting and remediation.

31 See, for example: *R v. Bata Industries Ltd.*, [1992] O.J. No. 236.

## V REPORTING AND DISCLOSURE

### i Environmental audits

With the introduction of the ISO 14000 environmental management standards, environmental auditing has become even more common. In addition, audits may be required for lending purposes, in purchase and sale transactions, for landlord or tenant purposes or simply to identify areas of potential risk. Environmental audits are not, however, generally mandated by any government legislation or regulation in Canada.

### ii Reporting requirements

There are specific reporting requirements under CEPA and provincial or territorial legislation for unauthorised discharges into the environment, including where 'adverse effects' may be caused.

## VI ENVIRONMENTAL PROTECTION

### i Air quality

Federal, provincial and territorial governments each have general air emission assessment and reporting obligations: under CEPA, there is a National Pollutant Release Inventory (NPRI); provincially, there are programmes such as Ontario Regulation 419/05, which requires Emission Summary and Dispersion Modelling Reports.<sup>32</sup> The NPRI is Canada's publicly accessible inventory of pollutants that have been released (into the air, water or land), disposed of or transferred for recycling.<sup>33</sup> The NPRI requires owners and operators to report releases of substances that exceed certain quantities. Canada has also regulated certain industries and air pollutants separately, in order to address the complexities of each.<sup>34</sup>

In 2012, the Ministers of the Environment (with the exception of Quebec) agreed to implement the Air Quality Management System (AQMS), which is a comprehensive approach to reducing air pollution by governments and stakeholders in Canada.<sup>35</sup> The goals of the AQMS are accomplished in many ways; for example, the provinces and territories delineate air zones within their jurisdictions and agree to improve air quality and ensure the Canadian Ambient Air Quality Standards are met.<sup>36</sup>

A growing number of municipalities have also implemented local air emissions by-laws. Pursuant to the City of Toronto Bylaw No. 1293-2008 (the Right to Know Bylaw), Toronto has created the ChemTRAC programme, designed to increase public awareness regarding chemicals and pollutants in the Toronto area by providing access to an interactive map of

32 Ontario Regulation 419/05, *supra* at Sections 22–27.

33 Environment and Climate Change Canada, National Pollutant Release Inventory (mod. 19 April 2014), online: [www.ec.gc.ca/inrp-npri/](http://www.ec.gc.ca/inrp-npri/).

34 For example: Under the Ozone-depleting Substances Regulations, 1998 (ODSR), individuals must receive authorisation from the ECCC prior to manufacturing, importing or exporting an ozone-depleting 'controlled substance' (defined in the ODSR) by obtaining a consumption allowance or a permit. The On-Road Vehicle and Engine Emission Regulations under CEPA establish emission limits and standards for all vehicles, engines and motorcycles and are harmonised with those in the United States by reference to applicable US standards.

35 Canadian Council of Ministers of the Environment, Resources – AQMS, online: [www.ccme.ca/en/resources/air/aqms.html](http://www.ccme.ca/en/resources/air/aqms.html).

36 *ibid.*

the city that allows residents to locate facilities in their neighbourhood that emit regulated substances.<sup>37</sup> The Right to Know Bylaw requires small and large companies to report to Toronto Public Health each year that the facility emits certain substances that have been identified to be harmful to health and linked to cancer or lung problems.<sup>38</sup> The Right to Know Bylaw obliges, for the first time, many small to medium-sized companies (such as printing companies, food and beverage manufacturers, etc.) to monitor their use and release of hazardous substances into the air and report any release to the public.<sup>39</sup> The Right to Know Bylaw has a lower threshold for reporting the release of certain substances than provincial and federal legislation.<sup>40</sup>

## ii Water quality

In Canada, the federal government is responsible for fisheries, navigation, federal lands and international relations, including issues related to the management of boundary waters, and also is generally responsible for agriculture, health and the environment. Provinces and territories are also responsible for regulation of waterways within each respective jurisdiction and CEPA is thus intended to supplement and complement existing provincial regulations.<sup>41</sup> In particular, CEPA regulates which substances may enter water in Canada to prevent deleterious effects to water.<sup>42</sup> The federal government, under this authority, has also released a number of guidelines with respect to protecting water quality from certain substances.<sup>43</sup> The Department of Fisheries and Oceans (DFO) and the ECCC share responsibility for the conservation and protection of fish habitat and freshwater in Canada under the Fisheries Act. The DFO administers habitat protection, the prohibition against any work or undertaking that would cause the harmful alteration, disruption or destruction of a fish habitat.<sup>44</sup> The ECCC oversees the prohibition against the depositing of deleterious substances into waters in Canada without authorisation.<sup>45</sup>

Provincial and territorial legislation plays a key role in protection of water quality in Canada. The Ontario Water Resources Act (OWRA) also makes it an offence to discharge any materials into water that impair the quality of the water, with reporting requirements for the same.<sup>46</sup> The goals of the OWRA are furthered by the Ontario EPA, which sets out specific

37 City of Toronto, 'ChemTRAC Data', online: [www.toronto.ca/community-people/health-wellness-care/health-programs-advice/chemtrac/chemtrac-interactive-map](http://www.toronto.ca/community-people/health-wellness-care/health-programs-advice/chemtrac/chemtrac-interactive-map).

38 Anne Wordsworth, Heather Marshall and Sarah Miller, Toronto Toxic Reduction Tool Kit, Toronto Cancer Prevention Coalition, March 2013, online: [www.cela.ca/sites/cela.ca/files/TorontoToxicReductionToolKit-fulltext.pdf](http://www.cela.ca/sites/cela.ca/files/TorontoToxicReductionToolKit-fulltext.pdf), at TK1.2.

39 *ibid.*, at TK1.2.

40 *ibid.*, at TK3.2.

41 Guide to CEPA, *supra* at 8.1.2 (Who Protects Canada's Marine Environment?).

42 Canada, Environment and Climate Change Canada, Federal Policy and Legislation, at 'Water Regulation'.

43 Canada, Environment and Climate Change Canada, Guidelines and Objectives (mod. 19 July 2017), online: [www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=E9DBBC31-1](http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=E9DBBC31-1).

44 Environment and Climate Change Canada, 'Fisheries Act' (mod. 7 June 2016), online: [www.ec.gc.ca/pollution/default.asp?lang=En&n=072416B9-1](http://www.ec.gc.ca/pollution/default.asp?lang=En&n=072416B9-1).

45 *ibid.*

46 Ontario Water Resources Act, RSO 1990, c O-40, at Section 30.

effluent limit regulations in certain sectors, including: petroleum, pulp and paper, industrial minerals, metal casting, metal mining, organic chemical manufacturing, inorganic chemical manufacturing, iron and steel, and electric power.<sup>47</sup>

Ontario, in particular, has enacted fulsome legislation for the protection of water quality in the province.<sup>48</sup> Ontario has pledged to protect and restore the ecological health of Ontario's Great Lakes in the Great Lakes Protection Act 2015, in order to follow through on its Great Lakes Strategy.<sup>49</sup> The Great Lakes Nutrient Initiative of the ECCC will provide funding to address algae growth in the Great Lakes and advance scientific research into the causes of algae.<sup>50</sup> In addition to other national efforts,<sup>51</sup> Canada and the United States entered into a Great Lakes Water Quality Agreement, which was most recently amended in 2012, wherein both parties agree to take steps to restore and protect the water quality and health of the ecosystems of the Great Lakes.<sup>52</sup>

### iii Chemicals

There have been considerable regulatory developments under the ECCC's Chemical Management Plan (CMP), since its inception in 2006, including requirements for surveys, substance reassessments and permits. Monitoring and surveillance initiatives are central to the CMP and involve the collection of chemical, physical and biological data to detect and characterise environmental change.<sup>53</sup> Environmental monitoring and surveillance initiatives include national monitoring programmes for landfills and concentrations of chemicals in the environment. Human surveillance and monitoring include obtaining information to focus research on areas with respect to determining baseline levels of chemicals that exist in Canadian citizens and corresponding health risks, trends in exposure, evaluation of under-studied substances, and assessment of the effectiveness of health and environmental efforts.<sup>54</sup>

Pursuant to the CMP, risk assessments of new substances and existing substances on the Domestic Substances List (DSL) are being undertaken to determine whether a substance is toxic<sup>55</sup> and thus poses a risk to human health or the environment and to impose restrictions upon its use as necessary.<sup>56</sup> CEPA provides the definition of toxic substances, which includes

<sup>47</sup> See regulations under EPA, *supra*.

<sup>48</sup> For example, the Safe Drinking Water Act, 2002 sets out standards for quality, testing, treatment, reporting and penalties for non-compliance with the Act that apply to owners of a municipal drinking water system or a regulated non-municipal drinking water system. Ontario has also enacted the Water Opportunities Act, which aims to foster innovative water, wastewater and stormwater technologies in Ontario to create clean-technology jobs and conserve and sustain water resources.

<sup>49</sup> Great Lakes Protection Act, 2015, SO 2015, c 24, at 1.

<sup>50</sup> Environment and Climate Change Canada, 'Phosphorus and Excess Algal Growth' (mod. 8 June 2017), online: <https://www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=6201FD24-1>.

<sup>51</sup> For example, the ECCC has established a fund to protect the water quality of Lake Winnipeg, Canada's sixth-largest lake (just behind the five Great Lakes), which is located in Manitoba.

<sup>52</sup> Environment and Climate Change Canada, 'Great Lakes water quality agreement' (mod. 10 August 2017), online: [www.ec.gc.ca/international/default.asp?lang=En&n=EB6F1B1B-1&wbdisable=true](http://www.ec.gc.ca/international/default.asp?lang=En&n=EB6F1B1B-1&wbdisable=true).

<sup>53</sup> Canada, Chemical Substances: Monitoring and Surveillance (mod. 26 July 2012), online: [www.chemicalsubstanceschimiques.gc.ca/plan/surveil/index-eng.php](http://www.chemicalsubstanceschimiques.gc.ca/plan/surveil/index-eng.php).

<sup>54</sup> *ibid*.

<sup>55</sup> Section 65 provides the definition of toxic substances, which includes substances that may have immediate or long-term harmful effects or pose a danger to the environment or human health.

<sup>56</sup> Canada, Environment and Climate Change Canada, 'The Canadian Environmental Protection Act, 1999 and the Assessment of New Substances', (mod. 18 July 2017), online: [www.ec.gc.ca/lcpe-cepa/default](http://www.ec.gc.ca/lcpe-cepa/default).

substances that may have immediate or long-term harmful effects or pose a danger to the environment or human health.<sup>57</sup> Restrictions upon the use of DSL substances have been expanding significantly as part of the CMP's reassessment of existing chemicals. Some substances on the DSL, used in 'significant new activities', are also subject to notification requirements.<sup>58</sup>

Transport Canada oversees the Transportation of Dangerous Goods Regulations (the TDG Regulations), which maintain nine classes of dangerous goods, namely explosives; gases; flammable liquids; flammable solids; oxidising substances and organic peroxides; toxic and infectious substances; radioactive materials; corrosive substances; and miscellaneous products, substances or organisms.<sup>59</sup> In addition to the classifications, certain dangerous goods are further assigned one of three hazard levels that are intended to show when a substance is particularly hazardous.<sup>60</sup> The TDG Regulations also set out specific requirements with respect to documentation and signage with respect to the dangerous goods. Among others, the TDG Regulations require that transporters of dangerous goods have a shipping document with respect to the dangerous goods that are being transported, which must contain certain information and have an Emergency Response Assistance Plan. It is also the responsibility of the transporters to ensure that there are adequate safety markings displayed that make it clear that dangerous goods are being transported, with immediate reporting requirements upon any release of a substance.<sup>61</sup>

#### iv Solid and hazardous waste and waste diversion

In Canada, federal jurisdiction over waste is very limited and generally restricted to certain categories of toxic and hazardous waste,<sup>62</sup> while provinces and territories may make regulations for all other wastes.<sup>63</sup> Under the Ontario EPA, a certificate of approval is required for a waste management or waste disposal site and it is prohibited to deposit waste in land that is not a waste disposal site.<sup>64</sup> Waste generation is, where consistent with the Ontario EPA more generally, subject to registration but not to permit requirements.<sup>65</sup>

In 2009, the Canadian Council of Ministers of the Environment approved an action plan for Extended Producer Responsibility (EPR),<sup>66</sup> which was intended to create

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asp?lang=En&n=84CC4046-1.

57 CEPA, *supra* at Section 64.

58 Canada, Environment and Climate Change Canada, 'Domestic Substances List' (mod. 14 March 2017), online: [www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=5F213FA8-1](http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=5F213FA8-1).

59 Transportation of Dangerous Goods Regulations, SOR/2016-95, online: [www.tc.gc.ca/eng/tdg/clear-part2-339.htm](http://www.tc.gc.ca/eng/tdg/clear-part2-339.htm), at Part 2.

60 *ibid.*

61 *ibid.*, at Parts 3 and 4.

62 Canada's response to hazardous waste is dealt with in more detail under the section entitled 'Contaminated land'.

63 Halsbury's Canada, Environment, 'Regulation of non-hazardous waste in Canada', at HEN-140.III.5(1); Halsbury's Canada, Environment, 'Federal regulation of solid waste', at HEN-141.III.5(2).

64 Ontario EPA, *supra* at Section 27.

65 Ontario EPA, *supra*.

66 According to the Canadian Council of Ministers of the Environment, Progress Report on the Canadian-wide Action Plan for Extended Producer Responsibility (2014), EPR is defined as 'a policy approach in which a producer's responsibility for a product is extended to the postconsumer stage of a product's life cycle'.



a harmonised approach by the provinces to waste management in Canada.<sup>67</sup> By making producers responsible for the end-of-life management of products, the responsibility and costs associated with these products at end-of-life is shifted from governments and consumers, to producers and thus there is an intended financial incentive for producers to use environmentally friendly packaging.<sup>68</sup> While the intent of EPR is to create a harmonised approach, provinces still have autonomy to determine how to implement the principles of EPR with respect to different kinds of waste. Corporations will need to be aware of costs associated with end-of-life management of products and the particular legislative framework in its jurisdiction.

In June 2016, the Ontario government introduced a unique waste diversion initiative, which came into effect in 2017. The Waste-Free Ontario Act enacted the RRCEA and the Waste Diversion Transition Act. More recently, the Tire Regulation was issued under the RRCEA and similar product-specific regulations are set to be in force for electronics and municipal hazardous waste by 2020. This new regime aims to shift to a 'circular economy' to increase resource recovery and diminish waste<sup>69</sup> and is the first of its kind in North America in that manufacturers, importers and brand owners are now directly responsible for diverting the waste created by their products and packaging.

## **v Contaminated land**

Provincial and territorial legislation, such as the Ontario EPA, provides for the cleanup and redevelopment of underused industrial and commercial brownfields. If a brownfield property is being redeveloped, property owners must meet requirements with respect to assessing the environmental condition of the property where seeking a record of site condition.<sup>70</sup> Ontario has recently released a set of draft guidelines to help proponents of projects consider climate change when completing an environmental assessment. The draft guideline suggests that project proponents consider the emissions of the project, the potential effect on the capacity of the surrounding environment to remove carbon dioxide from the area, and sets out general steps and questions to consider.<sup>71</sup>

## **VII CLIMATE CHANGE**

Canada's stated priorities with respect to climate change start with the Paris Agreement. Provincial and territorial governments have adopted a patchwork regulatory approach to address the effects of climate change. Alberta was Canada's first province to regulate greenhouse gas with its Specified Gas Emitters Regulation.<sup>72</sup> The province has also imposed a

67 Canadian Council of Ministers of the Environment, Progress Report on the Canadian-wide Action Plan for Extended Producer Responsibility (2014), ISBN 978-1-77202-007-6, online: [www.ccme.ca/files/Resources/waste/extended/CAP-EPR%20Progress%20Report.pdf](http://www.ccme.ca/files/Resources/waste/extended/CAP-EPR%20Progress%20Report.pdf), at 1.

68 *ibid.*

69 Government of Ontario, 'Strategy for a Waste-Free Ontario: Building the Circular Economy' (mod. 6 March 2017) online: <https://www.ontario.ca/page/strategy-waste-free-ontario-building-circular-economy>.

70 Ontario, Ministry of the Environment and Climate Change, 'Brownfields redevelopment', online: [www.ontario.ca/page/brownfields-redevelopment](http://www.ontario.ca/page/brownfields-redevelopment).

71 Ministry of the Environment and Climate Change, 'Consideration of Climate Change in Environmental Assessment in Ontario' (August 2016), online: [http://www.ecolog.com/daily\\_images/1003857166-1003857920.pdf](http://www.ecolog.com/daily_images/1003857166-1003857920.pdf).

72 Specified Gas Emitters Regulation, Alta Reg. 139/2007.

carbon levy on transportation and heating fuels; these rates went up on 1 January 2018.<sup>73</sup> The Alberta government also passed the Oil Sands Emissions Limit Act, which places an annual 100 megatonne cap on greenhouse gas emissions specifically from oil sands in Alberta, which is intended to encourage innovation and use of renewable energy technology.

Quebec has implemented a cap-and-trade system that places an overall cap on emissions, which is linked to California's cap-and-trade programme.<sup>74</sup> British Columbia implemented a carbon tax on all fossil fuels consumed in the province that has gradually increased since its inception in 2008.<sup>75</sup>

Recently, a dissenting group of provinces, including Manitoba, New Brunswick, Ontario and Saskatchewan have publicly committed to legally challenging the federal carbon fee, and a Supreme Court application on the question of jurisdiction to legislate in the area of climate change will be determined in 2019.<sup>76</sup> This will be a watershed event in the development and direction of climate change policy.

## VIII OUTLOOK AND CONCLUSIONS

The year 2019 will be a watershed year for federal environmental policy in Canada. If it survives the various constitutional challenges, looming election, and pressures from the United States and elsewhere, then we may finally see the realisation of a truly robust, internationally aligned environmental programme.

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73 Alberta Government, 'Carbon levy and rebates', online: [www.alberta.ca/climate-carbon-pricing.aspx](http://www.alberta.ca/climate-carbon-pricing.aspx).

74 Government of Quebec, 'The Quebec Cap-and-Trade System for Greenhouse Gas Emission Allowances: Frequently asked questions', online: [www.mddelcc.gouv.qc.ca/changements/carbone/documents-spede/q&a.pdf](http://www.mddelcc.gouv.qc.ca/changements/carbone/documents-spede/q&a.pdf), at 5.

75 British Columbia, Ministry of Finance, 'Carbon Tax', online: [www.fin.gov.bc.ca/tbs/tp/climate/carbon\\_tax.htm](http://www.fin.gov.bc.ca/tbs/tp/climate/carbon_tax.htm).

76 Paola Loriggio, 'Ontario Government to Challenge Federal Carbon Tax Plan In Court', *Global News* (2 August 2018), online: <<https://globalnews.ca/news/4367217/ontario-carbon-tax-court-challenge/>>.

# CHINA

*Cheng Xiaofeng, Hu Ke, Jiang Xinyan*<sup>1</sup>

## I INTRODUCTION

China witnessed significant developments to its environmental legislative landscape in 2018, which was the first year to see the resolutions of the 19th National Congress of the ruling party implemented, and was also a key period of transition for the 13th Five-Year Plan.<sup>2</sup> The government treats environmental problems seriously, and has committed to fight for the prevention and control of pollution and to combat climate change in its pursuit of ‘rapid, sustainable and healthy development’.

To achieve this, during the state institutional reform, the Ministry of Environmental Protection (MEP) has been officially renamed as the Ministry of Ecology and Environment (MEE), with the aim to consolidate law enforcement to protect the ecological environment.

New domestic legislation, amendments and regulations encompass protection of soil, water sources, ozone layer, ecological system and maritime environment.<sup>3</sup> The most noteworthy legislation that came into force in 2018 was the Environmental Protection Tax Law of the People’s Republic of China (PRC), which levied tax duties to replace discharge fees.

In respect of climate change, China supports the Paris Agreement and has committed to the promises made by fellow treaty members. 2018 was the first year for the newly launched national carbon trading market to be fully functional in China, with the power industry being the first fully covered industry and the total market value of the new trading scheme expected to reach 2 trillion yuan in the long term.<sup>4</sup>

## II LEGISLATIVE FRAMEWORK

The Environmental Protection Law (EPL), the primary source of law for environmental protection, was significantly amended in 2014. It is known as the ‘strictest environmental protection law in history’ in China. Article 1 of the EPL provides that:

*[t]he Law has been formulated for purposes of protecting and improving the environment, preventing and controlling pollution and other public hazards, safeguarding public health, advancing ecological progress, and facilitating the sustainable development of economy and society.*

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2 *China Daily*, 2018, <https://baijiahao.baidu.com/s?id=1588531779602271929&wfr=spider&for=pc>.

3 Ministry of Ecology and Environment, 2018, [http://www.mee.gov.cn/gzfw\\_13107/zcfg/fl/](http://www.mee.gov.cn/gzfw_13107/zcfg/fl/).

4 Hui Wang, 2018. *The Prospects of Chinese Carbon Trading Market*. Foresight Industry Research Institute.

Following the establishment of EPL, the MEE has made significant efforts each year to improve the environmental protection legislative framework in China. New legislation introduced in 2018 includes the Environmental Protection Tax Law of the PRC (effective since 1 April 2018, amended on 26 October 2018) and the Amendment to the Law of the PRC on the Prevention and Control of Water Pollution (effective since 1 January 2018).

The Environmental Protection Tax Law is the first single tax law that embodies the ‘green tax system’. The environmental tax is levied at an industry-specific fluctuating rate and more emission will incur higher tax; revenue will go to local government to compensate the local government for its loss of tax revenue as a result of the tax burden on local polluters.<sup>5</sup>

The amended Law on the Prevention and Control of Water Pollution has also been in force since 1 January 2018. The new law specifies more operational requirements. For instance, it demands underground oil tanks such as gas stations to use double-deck tanks or put in place other effective measures to prevent groundwater pollution. In addition, the new law also imposes harsher punishment for violations.<sup>6</sup>

Other laws that were amended in 2018 include the Law on Maritime Environmental Protection, the Energy Conservation Law, the Law on the Prevention and Control of Atmospheric Pollution, the Circular Economy Promotion Law, the Sand Control Law and the Law on the Protection of Wildlife.<sup>7</sup>

The regulations that were amended in 2018 include Regulations on Pollution Prevention and Control of Marine Environment in Coastal Construction Projects, Regulations for Prevention and Control of Marine Pollution Caused by Marine Construction Projects, Regulations on Natural Reserves, Ozone Depleting Substances Management Ordinance, and Regulations on Prevention and Control of Marine Pollution by Ships.<sup>8</sup> Besides, the new Reform Plan of Compensation System for Ecological Environmental Damage also took effect on 1 January 2018, where it stipulates that, by 2020, efforts shall be made to primarily establish a nationwide compensation system for damage to the ecological environment, with clear responsibilities, viable channels, normative technologies and effective compensation and restoration schemes.<sup>9</sup>

### III THE REGULATORS

The MEE remains as the central authority in enforcing environment and climate change laws and regulations in China. Provincial, prefectural and county governments have their own departments of environmental protection that work under the supervision of the MEE. That said, other departments are taking responsibility for environmental protection in matters within their jurisdiction. The State Oceanic Administration is responsible for maritime ecosystem and environment protection; the Ministry of Water Resources, the Ministry of Land Resources, the Ministry of Agriculture and the Administration of Forestry have authorities and duties in environmental protection related to water resources, land and mining resources, agriculture and forestry.

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5 Dowater, 2018, <http://www.dowater.com/info/2018-01-05/634469.html>.

6 Dowater, 2018, <http://www.dowater.com/info/2018-01-05/634522.html>.

7 Ministry of Ecology and Environment, 2018.

8 Ministry of Ecology and Environment, 2018.

9 MOFCOM, 2018, <http://diagram.mofcom.gov.cn/di/5a4478a9cd91897bcee836ba>.

These agencies may issue administrative licences, compel preventive or remedial measures and impose administrative penalties in their law enforcement if such authority is empowered to them by laws and regulations. Generally, administrative decisions rendered by the regulatory authorities may be challenged before the people's courts, which decide whether the decision (and the underlying procedure leading to the decision) is legitimate, but generally should not interfere with the exercise of discretionary power of the agency.

The Ministry of Public Safety and its local bureaus are responsible for the investigation of environment-related crimes, and the people's procuratorates (state organs of legal supervision) are responsible for the prosecution of crimes.

According to Opinions on Strengthening Ecological Environmental Protection by the State Council,<sup>10</sup> local governments are now explicitly encouraged to legislate ahead of the central government in the field of environmental protection.

Pollution of the environment, as a tortious act, may also give rise to civil liabilities that may be referred to the courts. Traditionally, *ratio decidendi* in prior court judgments do not have *stare decisis* (though, in practice, they are usually followed by the same court or lower courts for judicial conformity). But the newly implemented 'Guiding Cases' system allows the Supreme People's Court to publish guiding cases with binding authority over the courts to unify the application of laws in judicial practice. Based on the Opinions of the Supreme People's Court on Providing Judicial Services and Supports for the Protection of the Ecological Environment, dated 4 June 2018,<sup>11</sup> qualified high and intermediate people's courts may set up environmental resource divisions separately; if not qualified, they may set up specialised collegiate benches or judicial teams in relevant courts to take charge of environmental resources judicial works. The end purpose is to have the criminal, civil and administrative cases concerning environmental resources be handled by special judicial agencies or professional trial teams.

## IV ENFORCEMENT

### i Administrative proceedings

After the amendment of the EPL in 2015, the supervisory and enforcement force for environmental protection has been greatly reinforced. The provincial, prefecture and county environmental protection authorities (EPAs) are responsible for investigation and enforcement on environmental protection-related matters within the region according to the EPL. A monitoring mechanism of environmental protection has been formed, with both the government and the Communist Party of China in charge. According to the Opinions 2018,<sup>12</sup> the government would set up an integrated law enforcement team dedicated to the protection of the ecological environment, to be included in the queue of government administrative law enforcement agencies to promote the standardisation of law enforcement through the unification of public images, identifications, certificates, vehicles and equipment. It is considered as a further empowerment to the law enforcement agencies following the 2016 Guiding Opinions Regarding Pilot Work on Reform of Vertical Management System

10 Xinhua Net, 2018, [http://www.gov.cn/zhengce/2018-06/24/content\\_5300953.htm](http://www.gov.cn/zhengce/2018-06/24/content_5300953.htm).

11 The Supreme People's Court, 2018, <http://www.court.gov.cn/fabu-xiangqing-99842.html>.

12 Xinhua Net, 2018, [http://www.gov.cn/zhengce/2018-06/24/content\\_5300953.htm](http://www.gov.cn/zhengce/2018-06/24/content_5300953.htm).

for Monitoring Enforcement of Environmental Protection Institutions under Provincial Level, which aimed at curbing the influence of regionalism and short-sighted economic development for effective environment protection.<sup>13</sup>

If an EPA finds violations, it could take administrative coercive measures and impose administrative penalties against the offenders according to the EPL, the Administrative Penalties Law, the Administrative Coercion Law and other relevant laws and regulations. Commonly imposed penalties contain fines, consecutive penalty aggregated on a daily basis, restoration, seizure and detention of the facilities and equipment, restricting operation and suspending production for renovation.<sup>14</sup> Continuing ‘illegal discharge of pollutants’ will be subject to consecutive daily fines, the amount of which is decided based on the actual needs.<sup>15</sup> The concept of ‘control targets for the total emission volume of major pollutants’ was adopted in the EPL for the first time to specify the consequences corresponding to excessive emissions, where the EPAs are empowered to directly order the offending enterprises to restrict or even stop the operation and production for rectification.<sup>16</sup> Moreover, local EPAs may transfer the case to public security bureaus and impose a detention on the persons directly in charge of the offender entity along with other persons directly responsible for the pollution under certain circumstances listed in Article 63 of the EPL.

Besides, according to the Administrative Review Law, private citizens or entities may challenge the administrative acts taken by administrative organs before competent governments or administrative agencies to contest such administrative act.<sup>17</sup> When refusing to accept a specific administrative act taken by a department of the government at or above county level, the applicant may choose to apply to the government at the same level or to the same department at a higher level for administrative review.<sup>18</sup>

## ii Administrative actions

Private citizens or entities may bring administrative actions before competent courts against such administrative organs to contest administrative decisions or acts.<sup>19</sup> In most circumstances, district courts have jurisdiction over administrative lawsuits of first instance.<sup>20</sup> Defendants shall be the administrative organs that rendered the administrative decisions or conducted the administrative act (including action, non-action or omission) or, in cases of a prior administrative review, the review organ, depending on the outcome of the review.<sup>21</sup>

In addition, in accordance with Article 25 of Administrative Procedural Law (newly amended on 30 June 2017), the People’s Procuratorate is empowered to file actions against those administrative organs or agencies that fail to perform their statutory duties to protect ecological environment.

13 Zhong Ban Fa (2016) No. 63.

14 The Environmental Protection Law, Articles 59–61.

15 The Environmental Protection Law, Article 59.

16 Denning Jin and Yongqi Tao, ‘Harsher Legal Liabilities under the New Environmental Law Regime’ 2015.

17 The Administrative Review Law, Article 2.

18 The Administrative Review Law, Article 12.

19 The Administrative Procedure Law, Article 2.

20 The Administrative Procedure Law, Article 14.

21 The Administrative Procedure Law, Article 26.

### iii Criminal investigation and prosecution

With regard to the criminal aspect, public security bureaus take charge of criminal investigations, usually based on cases transferred to them by the environmental protection authorities, and the People's Procuratorate prosecutes individuals and entities who committed crimes in relation to the environment.

The Criminal Law lists crimes that natural persons, either in their individual capacity or as persons directly responsible for behaviours of entities, might be prosecuted for impairing the protection of environment and resources;<sup>22</sup> spreading poisonous or radioactive substances;<sup>23</sup> smuggling waste;<sup>24</sup> illegally dumping, piling up or treating solid wastes from abroad within the territory of China;<sup>25</sup> importing solid wastes without permission;<sup>26</sup> and dereliction of duty crime in environment administration.<sup>27</sup> Article 346 of the Criminal Law also provides that an entity that commits the above-mentioned crimes shall be fined.

Zhejiang Province Lishui Intermediate People's Court ruled on a significant case on 22 January 2018, *Lishui Liandu District People's Procuratorate v. Zhaolu Liu*,<sup>28</sup> in which the plaintiff sued the defendant for crimes of environmental pollution. The defendant was fined for interfering with the automatic monitoring equipment for the sewage treatment pond, which resulted in sampling error when tested by staff of the local environmental protection bureau. The Court ruled that the defendant's action violated the Criminal Law<sup>29</sup> and the relevant interpretation.<sup>30,31</sup>

### iv Private civil actions

Victims may bring tort action against environmental tortfeasors to seek civil remedy directly. Where any damage is caused by environmental pollution or ecological damage, the relevant persons shall bear tortious liability under the relevant provisions of the Tort Liability Law.<sup>32</sup>

In environment-related tort lawsuits, strict liability applies, and the burden of proof for causation, or the lack of causation, is shifted to the accused tortfeasor,<sup>33</sup> and the plaintiff only needs to prove tortious conduct and damage to establish a *prima facie* case. The most commonly used defences under the Tort Liability Law are force majeure, contributory liability<sup>34</sup> and third-party liability.<sup>35</sup>

22 The Criminal Law, Article 338.

23 The Criminal Law, Articles 114, 115.

24 The Criminal Law, Article 152.

25 The Criminal Law, Article 339(1).

26 The Criminal Law, Article 339(2).

27 The Criminal Law, Article 408.

28 Case number: (2018) Zhe 11 Xingzhong No. 42. Retrieved from: China Judgments Online.

29 The Criminal Law, Articles 338, 67(3), 45, 47 and 52.

30 Article 1(18) of Interpretation of Some Applicable Laws in Handling Criminal Cases Involving Environmental Pollution by the Supreme People's Court and the Supreme People's Procuratorate.

31 Case number: (2018) Zhe 1102 Xingchu No. 38. Retrieved from: China Judgments Online.

32 The Environmental Protection Law, Article 64.

33 The Tort Liability Law, Article 29.

34 The Tort Liability Law, Articles 26, 67.

35 The Tort Liability Law, Articles 28, 68.

Remedies available in civil actions include monetary damages, and injunctions ranging from cessation of infringement, removal of obstruction, elimination of danger and restoration to the original state, to apology.<sup>36</sup>

The statute of limitation for bringing civil actions in relation to environmental pollution is three years, starting from the time when the plaintiff is aware or should be aware of the harm.<sup>37</sup>

## v Public interest civil actions

Moreover, The EPL established the environmental public interest lawsuit regime, which entitles competent social organisations to bring environmental public interest lawsuits for tortious behaviours that pollute the environment and harm the public interest, even though they would not have standing for a private civil action. Article 58 of the EPL specifies the conditions for a social organisation to bring public interest lawsuits.<sup>38</sup>

Social organisations with national influence such as the China Environmental Protection Federation and Friends of Nature, as well as numerous local environmental protection associations, have brought a number of environmental public interest lawsuits in different areas of the country. Article 18 of the Interpretations of the Supreme People's Court on Issues Concerning the Application of Law in the Trial of Environment-related Civil Public Interest Lawsuits provides that, in addition to regular civil remedies, courts may issue injunctions compelling tortfeasor to restore the environment or pay costs for such restoration to a public fund.

After the very first environmental public interest case between Friends of Nature and the Fujian Green Home Environment-Friendly Centre, another significant case was brought to the spotlight by Zhejiang Kaihua People's Court. The court rendered a civil ruling on 27 September 2018, *Zhejiang Kaihua People's Procuratorate v. Quzhou Ruilijie Chemical Industry Co Ltd*,<sup>39</sup> in which it was held that Ruilijie's tortious conduct has caused massive irreversible damage to the local ecological environment and severely harmed public interest, therefore shall bear civil liability and any disposal and restoration costs associated with it, which amounted to over 1 million yuan.

## V REPORTING AND DISCLOSURE

The disclosure requirements and public involvement in connection with environmental protection can be found in Chapter 5 of the EPL. The MEE and the EPAs are responsible for disclosing information regarding environmental quality, supervision, emergencies, permits, penalisation, fee charging and usage issues, as the competent department of environmental

<sup>36</sup> The Tort Liability Law, Article 15.

<sup>37</sup> The Environmental Protection Law, Article 66.

<sup>38</sup> There are two conditions under Article 58: the social organisation is registered in the civil administrative departments of the people's government at the city (divided into districts) level or above in accordance with the law; and the social organisation has been specially engaged in public environmental protection activities over five consecutive years, without record of any violation of laws.

<sup>39</sup> Case Number: (2017) Zhe 0824 Minchu No. 3843.



protection at different levels. The EPAs also take charge of recording environmental violations in the social credit archives and publishing the list of offenders to the public under Measures for the Disclosure of Environmental Information.<sup>40</sup>

Key pollutant-discharging entities are required to truthfully disclose the names of their major pollutants, discharge methods, emission concentration, total emissions and excess emissions, as well as the construction and operation of pollution prevention and control facilities.<sup>41</sup> More details can be found in the Measures for the Disclosure of Environmental Information by Enterprises and Public Institutions.

## VI ENVIRONMENTAL PROTECTION

### i Air quality

The State Council sets the ultimate goals for air pollutant emission control periodically, and local governments are permitted to determine the emission control goal for their territory, for each entity, especially key pollutant discharging entities, and issue relevant permits. The Law on the Prevention and Control of Atmospheric Pollution is the primary source of law that governs air pollution-related environmental problems. It stipulates that air quality standards and emission targets shall be set by MEE or local governments,<sup>42</sup> violations to the law will be subject to fines.<sup>43</sup> The Integrated Emission Standards for Air Pollutants (GB16297 – 1996) set forth emission standards for 33 kinds of different air pollutants, together with specific air pollutant emission standards for boilers, industrial furnace, thermal-power stations, automobiles, motorcycles, etc. Local authorities are encouraged to establish more stringent emission standards for air pollutants.

To further implement the Law on the Prevention and Control of Atmospheric Pollution, various standards and plans were issued in 2018. The MEE promulgated the Technical Specifications for Operation and Quality Control of Ambient Air Quality Automated Monitoring System for Particulate Matter (PM10 and PM2.5),<sup>44</sup> which added operation and quality control requirements for PM2.5 continuous automatic monitoring system. In the automobile industry, the Limits and Measurement Methods for Emissions from Light-Duty Vehicles<sup>45</sup> (China V Emission Standard) has been in force since 1 January 2018 in accordance with the Air Pollution Control Plan.<sup>46</sup> The newly enforced standard is equivalent to EU Stage 5 emission standards, and automobiles that follow pre-China IV standards would not be allowed on the road anymore. The new standard is expected to cut the NO<sub>x</sub> emission by 25 to 43 per cent. Further, the China VI Emission Standard is currently under preparation

<sup>40</sup> The Environmental Protection Law, Article 54.

<sup>41</sup> The Environmental Protection Law, Article 55.

<sup>42</sup> The Law on the Prevention and Control of Atmospheric Pollution, Article 8.

<sup>43</sup> The Law on the Prevention and Control of Atmospheric Pollution, Chapter 7.

<sup>44</sup> HJ 817-2018 partially in replacement of HJ/T 193-2005. Ministry of Ecology and Environment, 2018, <http://kjs.mee.gov.cn/hjbhbz/bzwb/>.

<sup>45</sup> GB 18352.5 – 2013 (China V Emission Standard) in replacement of GB18352.3 – 2005 (China IV Emission Standard). Ministry of Ecology and Environment, 2018.

<sup>46</sup> *Guofa* [2013] No. 37. The Plan requires that by 2017, the national inhalable particulate matter concentration to decrease by more than 10 per cent compared to 2012. The fine particulate matter concentration in Beijing, Tianjin, Hebei, Yangtze River Delta and Pearl River Delta to be decreased by 25 per cent, 20 per cent and 15 per cent, respectively. The average annual fine particulate matter concentration in Beijing should be controlled at 60 micrograms/cubic metres circa.

and is expected to enter into force from 1 July 2020. Meanwhile, the Limits and Measurement Methods for Emissions from Diesel Vehicles was approved on 27 September 2018,<sup>47</sup> which added on-board diagnostics checks, emission limits for NO<sub>x</sub> and adjusted the smoke emission limits, and is expected to be effective from 1 May 2019.

## **ii Water quality**

The Law on the Prevention and Control of Water Pollution comprises chapters regarding regulating water pollution with regard to industrial, urban, agricultural and rural, and vessel activities, and the Implementing Rules of the Law of the PRC on the Prevention and Control of Water Pollution details corresponding requirements. As required by the Law on the Prevention and Control of Water Pollution, entities are not allowed to discharge industrial and medical effluents without obtaining a permit from the government beforehand, and entities that perform centralised disposal of urban effluents should obtain permits in advance as well.<sup>48</sup> The amendment to the Law in 2018 places special focus on agricultural water waste and drinkable water safety, while also increasing the cost of violation to a maximum of 1 million yuan.<sup>49</sup>

Alongside the amendment to the Law on the Prevention and Control of Water Pollution in 2018, the MEE issued the Discharge Standard for Water Pollutants from Ships on 16 January 2018 and became effective on 1 July 2018.<sup>50</sup> The new standard provides for discharge control requirements for oily sewage, domestic sewage, sewage containing toxic liquid substances and ship garbage disposal according to the types of water and ship.

## **iii Chemicals**

Current effective laws and regulations for hazardous chemicals mainly include the Work Safety Law, the Regulations of the Work Safety Licence, the Fire Protection Law, the Emergency Response Law and the Regulations of the PRC on Administrative Chemicals Subject to Supervision and Control (amended in 2011).

Entities engaged in hazardous chemicals-related business shall obtain certain permits, conduct safety assessment, conduct environmental impact assessments and provide a responsive emergency plan at the initial stage of the project.

## **iv Solid and hazardous waste**

The Law on the Prevention and Control of Environmental Pollution Caused by Solid Waste concretely directs the work for the prevention and control of industrial solid waste and domestic garbage. Permits must be acquired for collection, storage, disposal and utilisation of hazardous waste, and hazardous waste manifest must be completed conforming to the regulations.<sup>51</sup> Further, there are regulations for transportation and disposal of abandoned electronic devices, medical waste, tailings and urban construction waste. However, China does not have requirements for financial assurance yet.

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47 GB 3847-2018 in replacement of GB3847-2005. Ministry of Ecology and Environment, 2018.

48 The Law on the Prevention and Control of Water Pollution (amended in 2017, effective from 1 January 2018), Article 21.

49 Dowater, 2018. Retrieved from: <http://www.dowater.com/info/2018-01-05/634469.html>.

50 GB 3552-2018 in replacement of GB 3552-83. Ministry of Ecology and Environment, 2018.

51 The Law on the Prevention and Control of Environmental Pollution Caused by Solid Waste, Article 57.

To further implement the Law on the Prevention and Control of Environmental Pollution Caused by Solid Waste, the MEE issued a new method<sup>52</sup> in 2018 to standardise the evaluation of polycyclic aromatic hydrocarbons in solid wastes and their leachate to better regulate the hazardous impact of this type of persistent organic pollutant on human health.

#### **v Contaminated land**

On 31 August 2018, the Law on the Prevention and Control of Soil Pollution was adopted by the fifth meeting of the Standing Committee of the 13th National People's Congress and was scheduled to become effective on 1 January 2019.<sup>53</sup> Compared to atmospheric pollution and water pollution, soil pollution is more invisible and accumulative, yet it is the most difficult to detect instantly. For the purpose of better regulation and deterrence, the new law was drafted with four major spotlights:

- a* any organisation or individual has the obligation to protect the soil and prevent soil pollution, and effective measures should be taken to prevent and reduce soil pollution, otherwise legal responsibilities will incur according to the law;<sup>54</sup>
- b* the State Council has the unified leadership to conduct nationwide census of soil pollution and the census shall be organised at least once every 10 years;<sup>55</sup>
- c* a central special fund and provincial fund for soil pollution prevention and control will be established, dedicated to the prevention and control of soil pollution on agricultural land, and also applied to soil pollution risk management and remediation when the responsible person cannot be identified;<sup>56</sup> and
- d* any violation of the law will be subject to fine up to 2 million yuan,<sup>57</sup> and for criminal acts, the person involved will be prohibited from entering the practice indefinitely.<sup>58</sup>

Regarding soil polluting actions that harm national and public interests, relevant agencies and associations can bring tort actions against the environmental tortfeasors under the EPL, Civil Procedural Law and Administrative Procedural Law.

## **VII CLIMATE CHANGE**

### **i Source of law and policies**

Since China ratified the United Nations Framework Convention on Climate Change, a number of administrative and regulative documents concerning climate change and greenhouse gas (GHG) emission issues have been promulgated, for instance:

- a* China's National Climate Change Programme (2007);
- b* the White Paper on China's Policies and Actions for Addressing Climate Change (2011);
- c* the 12th Five-Year Plan (for 2011 to 2015);

<sup>52</sup> HJ 950-2018 by MEE. Effective from 1 December 2018.

<sup>53</sup> The PRC President Order No. 8, 2018, [http://www.npc.gov.cn/npc/xinwen/2018-08/31/content\\_2060158.htm](http://www.npc.gov.cn/npc/xinwen/2018-08/31/content_2060158.htm).

<sup>54</sup> The Law on the Prevention and Control of Soil Pollution, Article 4.

<sup>55</sup> The Law on the Prevention and Control of Soil Pollution, Article 14.

<sup>56</sup> The Law on the Prevention and Control of Soil Pollution, Article 71.

<sup>57</sup> The Law on the Prevention and Control of Soil Pollution, Article 86.

<sup>58</sup> The Law on the Prevention and Control of Soil Pollution, Article 90.

- d* the 13th Five-Year Plan (for 2016 to 2020);
- e* the Action Plan for Adaption to Climate Change (2013); and
- f* China's Policies and Actions for Addressing Climate Change (2016).

However, although it started three years ago, the drafting of the Law on Combating Climate Change is still in progress and has not been put into the recent schedule of the legislature.

## **ii Regulatory authorities**

The Department of Climate Change in the NDRC takes charge of climate change-related regulatory work. However, since there has not been any act of the National People's Congress or ordinance of the state council, climate change-related law enforcement is very limited, and the authorities are still focusing on rulemaking.

## **iii Policy focus**

China's National Climate Change Programme illustrates that GHG mitigation should focus on key areas of energy production and transformation, energy efficiency improvement and energy conservation, industrial processes, agriculture, forestry and municipal wastes.

## **iv Regulated activities**

As per the National Action Plan on Climate Change (2014 to 2020) issued by the NDRC, the regime for addressing climate change-related issues includes control of GHG emissions, adapting to climate change, low-carbon pilots and demonstrations, supporting policies, etc. In particular, concerning control of GHG emissions, various industries are specifically regulated, including the energy industry (including electricity and fossil energy), iron and steel industry, architectural material industry (including cement, glass and ceramic), chemical industry, non-ferrous metal industry, paper industry, food and medicine industry and textile industry. Urban and rural construction, transportation area, agricultural activities, commercial activities and waste disposal are also regulated.<sup>59</sup>

## **v Domestic carbon trading**

On 19 December 2017, the NDRC, upon approval of the State Council, issued the Building Plan for a National Carbon Trading Market (Power Generation Sector), marking the completion of overall design and start of operation, of a national carbon trading system. According to the Building Plan, the system building will involve three steps: building nationwide date-reporting, registration and transaction log systems in the first year, conducting a simulated transaction of allowances in the second year and checking the effectiveness and reliability of the market, and to start spot trading of allowances, and expand the market to cover other products and sectors thereafter, with the ultimate goal of building a carbon market with clear ownership, high-level protection, smooth circulation, effective regulation, fairness and transparency.

According to the MEE, up until August 2018, the total carbon trading volume in seven pilot markets, including Beijing and Tianjin, has reached 6 billion yuan, and the total volume and intensity of carbon emissions have been reduced.<sup>60</sup> The Director of Climate Change

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<sup>59</sup> *Fa Gai Qi Hou* [2014] No. 2347.

<sup>60</sup> [http://k.sina.com.cn/article\\_1641561812\\_61d83ed402000e98x.html](http://k.sina.com.cn/article_1641561812_61d83ed402000e98x.html).

Division of Ministry of Ecology and Environment pointed out that China's rapid growth of carbon emissions has been initially reversed and has decreased from rapid to low growth.<sup>61</sup> The guiding document on the establishment and operation of the carbon trading market, the Provisional Regulations on Management of Carbon Emissions Trading, has been drafted and the relevant department is striving for the introduction as soon as possible, but the issuance time is not yet confirmed.

## **VIII OUTLOOK AND CONCLUSIONS**

There were some significant improvements and changes to the environmental protection system in China in 2018. The former MEP was renamed to the MEE, demonstrating the government's resolve to not only protect but preserve the ecological environment. With the introduction of two major legislation this year, the Environmental Protection Tax Law and the new version of the Law on the Prevention and Control of Water Pollution, together with the new Reform Plan of Compensation System for Ecological Environmental Damage, the national environmental legislative landscape has gradually become more comprehensive.

The overall legislative trend in China in the past year has been to decentralise legislative and regulatory powers, but enforcement has become more unified and standardised in an effort to achieve the long-term effect of environmental protection. Meanwhile, there have been more proceedings brought by the People's Procuratorate against perpetrators under environmental protection legislation compared to 2017, and more impactful cases are expected to arise in 2019 as governments and society become familiarised with new legal instruments.

For the purpose of in-depth implementation of environmental protection laws and regulations, technical specifications and operational standards that cover more and more industries are being promulgated by the MEE in pursuit of building a 'green economy', especially to combat air pollution that haunts most of China. A more aggressive automobile emission standard, China VI, is scheduled to be enforceable from 2020, while the new emission standard for diesel vehicles will become effective this year. Moreover, China is also expecting the enforcement of the new Law on the Prevention and Control of Soil Pollution to be implemented as of the beginning of this year.

Lastly, the domestic carbon trading scheme was introduced to the market in 2018 with the first eight months of the year having witnessed the trading volume of 6 billion yuan. With more and more industries and businesses getting involved, some observers projects the total market value to reach 200 billion yuan in 10 years' time.

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61 MEE, 2018, <http://shoudian.bjx.com.cn/html/20181112/940888.shtml>.

# EUROPEAN UNION

*Jacquelyn F MacLennan and Tallat S Hussain<sup>1</sup>*

## I INTRODUCTION

The current EU environment and climate change policy objectives are set out in the Seventh Environmental Action Programme, which guides EU environment policy until 2020.<sup>2</sup> The objectives are to protect, conserve and enhance the European Union's natural capital; turn the European Union into a resource-efficient, green and competitive low-carbon economy; and safeguard the European Union's citizens from environment-related pressures and risks to health and well-being.<sup>3</sup>

Recent initiatives include overhauling the European Union's current environmental legislative framework 'to make it fit for purpose'<sup>4</sup> and further encouraging 'Green Growth'<sup>5</sup> to turn the European Union into a resource-efficient, green and competitive low-carbon economy. The European Commission also recently announced a Plastics Strategy<sup>6</sup> and proposed new rules banning or reducing consumption of single-use plastics.<sup>7</sup> The European Union is committed to its 2030 targets to cut greenhouse gas emissions by 40 per cent and to improve energy efficiency by 27 per cent.<sup>8</sup>

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1 Jacquelyn F MacLennan is a partner and Tallat S Hussain is environmental counsel at White & Case LLP. The authors wish to thank Charlotte Van Haute and Vanessa Kempeneers for their assistance.

2 In November 1973, the First Environmental Action Programme was agreed, reflecting concerns about the 'limits of growth' discussed at the first UN Conference on Environment in Stockholm in 1972. In March 2018, the European Parliament adopted a report on the implementation of the Programme, see <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A8-2018-0059+0+DOC+PDF+V0//EN>, accessed 5 December 2018.

3 The tools available for the European Union to achieve these goals are: better implementation of legislation; better information by improving the knowledge base; more and wiser investment for environment and climate policy; and full integration of environmental requirements and considerations into other policies, <http://ec.europa.eu/environment/action-programme>, accessed 5 December 2018.

4 Mission Statement of the President of the European Commission to the Commissioner for Environment, Maritime Affairs and Fisheries [https://ec.europa.eu/commission/sites/cwt/files/vella\\_en.pdf](https://ec.europa.eu/commission/sites/cwt/files/vella_en.pdf), accessed 5 December 2018.

5 See [http://ec.europa.eu/environment/green-growth/index\\_en.htm](http://ec.europa.eu/environment/green-growth/index_en.htm), accessed 5 December 2018.

6 See [http://europa.eu/rapid/press-release\\_IP-18-5\\_en.htm](http://europa.eu/rapid/press-release_IP-18-5_en.htm), accessed 5 December 2018.

7 See [https://ec.europa.eu/commission/news/single-use-plastics-2018-may-28\\_en](https://ec.europa.eu/commission/news/single-use-plastics-2018-may-28_en), accessed 5 December 2018.

8 EU 2030 Climate & Energy Framework [http://ec.europa.eu/clima/policies/strategies/2030\\_en](http://ec.europa.eu/clima/policies/strategies/2030_en), accessed 5 December 2018. Member States are scheduled to submit their draft National Climate and Energy Plans for the achievement of the 2030 climate and energy targets to the Commission by the end of 2018.

In the wake of the Paris Agreement<sup>9</sup> and reflecting the European Union's prominent role in combating climate change impact, the political focus remains on environmental sustainability and tackling climate change.<sup>10</sup> This is further reflected in the Commission's new long-term strategy to reach a climate-neutral economy by 2050. The importance of reducing CO<sub>2</sub> emissions by 2030 was underscored by the President of the European Commission in his 2018 State of the Union Address.<sup>11</sup> The proposed EU budget for the period 2021 to 2027 also foresees increased funding to support environment and climate action.

## II LEGISLATIVE FRAMEWORK

Environmental legislation in the European Union does not have a long history. The European Union's founding treaty, the Treaty of Rome, made no mention of environmental policy, and it was not until a 1973 European Council Declaration<sup>12</sup> that environmental issues were even addressed in EU law and policy. Over the years and through various treaty revisions, the European Union has developed an environmental protection and climate change framework.<sup>13</sup> Today, Article 3(3) of the Treaty on European Union (TEU), inserted by the 2009 Lisbon Treaty, lists among the European Union's objectives 'sustainable development . . . based on . . . inter alia a high level of protection and improvement of the quality of the environment'. Environmental policy is now listed as an element in the completion of the internal market through Article 114(3) of the Treaty on the Functioning of the European Union (TFEU).

Article 194 TFEU, which is the legal basis for the adoption of measures in the field of energy, requires EU policy to be exercised with regard to preserving and improving the environment, as well as promoting energy efficiency and energy saving and the development of new and renewable forms of energy. The TFEU contains a specific section on environmental policy in Title XX. Article 191(1) provides that the European Union shall contribute to:

- a* preserving, protecting and improving the quality of the environment;
- b* protecting human health;
- c* prudent and rational utilisation of natural resources; and
- d* promoting measures at an international level<sup>14</sup> to deal with regional or worldwide environmental problems, and in particular combating climate change.

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9 [http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php), accessed 5 December 2018.

10 See for example the European Commission's reaction to the signing of the Paris Agreement [http://ec.europa.eu/clima/policies/international/negotiations/paris\\_en](http://ec.europa.eu/clima/policies/international/negotiations/paris_en), accessed 5 December 2018.

11 See [https://ec.europa.eu/commission/sites/beta-political/files/soteu2018-speech\\_en\\_0.pdf](https://ec.europa.eu/commission/sites/beta-political/files/soteu2018-speech_en_0.pdf), accessed 5 December 2018.

12 Declaration of the Council of the European Communities and of the representatives of the Governments of the Member States meeting in the Council of 22 November 1973 on the programme of action of the European Communities on the environment OJ C 112, 20.12.1973, pp. 1–53. In 1967, the Directive for harmonised classification and the labelling of dangerous chemicals was adopted (but not finalised until 1973).

13 See Sections II to IV for important parts of that framework; see also the Commission's website for an overview, [http://ec.europa.eu/environment/index\\_en.htm](http://ec.europa.eu/environment/index_en.htm), accessed 5 December 2018.

14 The European Union is also contributing to the implementation of the UN Sustainable Development Goals, which are now included in the 2030 Agenda for Sustainable Development adopted by the European Union and its Member States, see [http://ec.europa.eu/environment/sustainable-development/SDGs/implementation/index\\_en.htm](http://ec.europa.eu/environment/sustainable-development/SDGs/implementation/index_en.htm), accessed 5 December 2018.

To attain these objectives, the following principles apply. Measures should be adopted on the basis of:

- a* the highest level of protection taking into account the diversity of situations in the various regions of the European Union;
- b* the precautionary principle;<sup>15</sup>
- c* preventative action;
- d* environmental damage should as a priority be rectified at source; and
- e* the polluter should pay.<sup>16</sup>

To implement these principles, the EU legislature is empowered to adopt legal acts (such as directives and regulations).<sup>17</sup>

The European Union has moved towards adopting environmental measures in the form of regulations that are directly applicable in the law of Member States, such as the fundamentally important Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation regarding chemicals.<sup>18</sup> The other mechanism typically used for environmental legislation in the European Union is a directive, which must be transposed into national law, but Member States have discretion in terms of the form of implementing measures.<sup>19</sup> Some of the more significant directives are the EU Habitats Directive,<sup>20</sup> the Waste Framework Directive,<sup>21</sup> the Air Quality Framework Directive<sup>22</sup> and the Industrial Emissions Directive.<sup>23</sup> The EU emissions trading scheme (EU ETS) is one of the more far-reaching EU

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15 The precautionary principle is an approach to risk management that is based on the possibility that a given policy or action might cause harm to the public or the environment and if there is still no scientific consensus on the issue, the policy or action in question should not be pursued. Once more scientific information becomes available, the situation should be reviewed.

16 These were introduced into the Treaties by the Single European Act 1987 and are now contained in Article 191(2) TFEU.

17 EU environmental law must take account of available scientific and technical data, environmental conditions in the various geographic regions of the European Union, the potential benefits and costs of action or inaction, and the economic and social development of the European Union as a whole as well as the balanced development of its regions (see Article 192(3) TFEU). Legal acts adopted pursuant to Article 192 TFEU do not prevent Member States from maintaining or introducing more stringent protection measures, so long as such measures are compatible with the TEU and TFEU and are notified to the Commission (see Article 193 TFEU).

18 Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC OJ L 396, 30 December 2006, pp. 1–850.

19 Article 288 TFEU provides: '[t]o exercise the Union's competences, the institutions shall adopt regulations, directives, decisions, recommendations and opinions'.

20 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

21 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance) OJ L 312, 22 November 2008, pp. 3–30.

22 Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe OJ L 152, 11 June 2008, pp. 1–44.

23 Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Text with EEA relevance OJ L 334,



measures, as it also links to the Kyoto Protocol emission reduction and trading mechanisms.<sup>24</sup> Currently in its third phase (2013–2020), the EU ETS sets an EU-wide cap on emissions of certain greenhouse gases and allocates allowances by auction (rather than for free, as was the approach for the first and second phases). The European Union recently published new rules on the fourth phase of the EU ETS, which will apply for the period 2021 to 2030.<sup>25</sup>

The European Union may also enter into international agreements on environmental protection with other countries and international organisations (Articles 191(1) and (4) TFEU). These may contain obligations that must be implemented into EU law. For example, the European Union has acceded to the Aarhus Convention<sup>26</sup> and the Kyoto Protocol,<sup>27</sup> and on 5 October 2016 to the historic Paris Agreement, which aims to limit global warming well below 2°C above pre-industrial levels.<sup>28</sup>

Finally, and beyond the European Union's specific environmental competences, the TFEU contains a horizontal environmental clause in Article 11, which requires environmental protection to be integrated into the definition and implementation of all EU policies and activities, in particular with a view to promoting sustainable development.<sup>29</sup> This statement is echoed in Article 37 of the Charter of Fundamental Rights of the European Union (the Charter), which was incorporated into the EU Treaty from the Lisbon Treaty in 2009), raising the status of environmental protection to a fundamental right.

After considerable criticism about the overreach of EU initiatives in the environment space, the Commission has narrowed its approach, as reflected in its statement 'when proposing new policies and laws, the Commission is focusing on the things that really do need to be done by the European Union, and makes sure they are done well.'<sup>30</sup>

### III THE REGULATORS

The primary policymaker and enforcer of EU environmental and climate change rules is the European Commission (the Commission). While EU environmental legislation is

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17 December 2010, pp. 17–119. Note that the transposition deadlines for these directives have passed.

24 Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted on 11 December 1987.

25 See <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1543233008872&uri=CELEX:32018L0410> accessed 5 December 2018.

26 UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, adopted on 25 1998, [www.unece.org/env/pp/treatytext.html](http://www.unece.org/env/pp/treatytext.html), accessed 5 December 2018; the Aarhus Convention has been implemented through various EU directives, including Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information, as well as regulations which align the internal procedures of EU institutions to the Convention.

27 The Kyoto Protocol sets internationally binding emission reduction targets. Both the European Union and its Member States are signatories.

28 The Paris Agreement, adopted on 12 December 2015 and entered into force on 4 November 2016, [http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php), accessed on 5 December 2018. A work programme to fully implement the Paris Agreement was published on 20 June 2017.

29 On 27 June 2017, the European Parliament published a report on 'EU action for sustainability', see <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A8-2017-0239+0+DOC+PDF+V0//EN>, accessed 5 December 2018.

30 See, e.g., [https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how\\_en](https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en), accessed 5 December 2018.

scrutinised and formally adopted by the European Council and the European Parliament, the Commission acts as the initial proposer of legislation in the EU legislative process. Article 17 TEU identifies the Commission's role as ensuring the application of the Treaties, including their environmental provisions, and secondary measures (such as directives and regulations). The Commission is also often described as the 'Guardian of the Treaties' for the European Union.<sup>31</sup> If the Commission considers that a Member State has failed to fulfil its EU environmental law (or other) obligations, it may bring infringement proceedings, as described in Section IV, *infra*.

The department of the Commission responsible for fulfilling its general functions in the environmental sphere is the Directorate-General for Environment, which has a staff of just over 500. In 2010, a new Directorate-General for Climate Action was created, responsible for dealing with consequences of climate change and implementing the EU ETS.<sup>32</sup> The Directorate-General for Energy is responsible for energy policy, and these three Directorate Generals have to work together closely, recognising the importance of energy policy in creating a sustainable environment.

Specialised bodies, offices and agencies regulate specific sectors and aspects of EU environmental law and policy. The European Chemical Agency, for example, is responsible for the registration, evaluation, and potential authorisation or restriction of chemicals under the REACH Regulation. Other important bodies are the European Food Safety Authority and the European Integrated Pollution Prevention and Control Bureau. In addition, the European Environment Agency is responsible for providing information on the environment (including in the energy, industry and transport sectors).<sup>33</sup>

#### IV ENFORCEMENT

The Commission and other EU bodies with a role in environmental policy are overseen by the Court of Justice of the European Union (CJEU, constituted by the General Court and the Court of Justice). Pursuant to Article 263 TFEU, the CJEU has responsibility for reviewing the legality of legislative acts (such as regulations and directives) and other acts of the Commission and other EU bodies, offices or agencies intended to produce legal effects in relation to third parties.<sup>34</sup> As well as Member States and EU institutions,<sup>35</sup> individuals and non-government organisations (NGOs) may challenge EU legal acts. For example, in 2018, 10 families from Portugal, Germany, France, Italy, Romania, Kenya, Fiji, and Sáminuorra (a Swedish Youth Association), brought an action in the EU General Court seeking to compel the European Union to make more stringent greenhouse gas emission reductions than the

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31 [http://eur-lex.europa.eu/summary/glossary/european\\_commission.html](http://eur-lex.europa.eu/summary/glossary/european_commission.html), accessed 5 December 2018.

32 [www.eea.europa.eu/data-and-maps/data-providers-and-partners/directorate-general-for-climate-action](http://www.eea.europa.eu/data-and-maps/data-providers-and-partners/directorate-general-for-climate-action), accessed 5 December 2018.

33 Established by the European Economic Community (EEC) Regulation 1210/1990 (amended by EEC Regulation 933/1999 and EC Regulation 401/2009), the European Environment Agency has been operational since 1994. It has 33 member countries, including the 28 EU Member States and Iceland, Liechtenstein, Norway, Switzerland and Turkey, [www.eea.europa.eu](http://www.eea.europa.eu), accessed 5 December 2018.

34 For some of the more significant cases before the CJEU relating to environmental issues such as air, waste, water and nature conservation see [http://ec.europa.eu/environment/legal/law/pdf/leading\\_cases\\_en.pdf](http://ec.europa.eu/environment/legal/law/pdf/leading_cases_en.pdf), accessed 5 December 2018.

35 The EU institutions include the Commission, Council and European Parliament.

40 per cent target by 2030.<sup>36</sup> However, obtaining standing to bring an action is notoriously difficult for individuals and NGOs, particularly in the environmental context.<sup>37</sup> As a result, EU environmental legislation is often subject to challenge in national courts, after it has been implemented into national law. Questions relating to the legality of EU measures may reach the CJEU if a preliminary ruling is requested by a national judge.<sup>38</sup>

If the Commission considers a Member State has failed to fulfil an obligation under the Treaties, including complying with EU environmental treaty obligations and implementing EU legal acts in the environmental sphere, it is responsible for bringing infringement proceedings against the Member State in question, under Article 258 TFEU. The Commission will first deliver a reasoned opinion on the matter after giving the Member State concerned the opportunity to make submissions. If the Member State concerned does not comply with the opinion of the Commission within the prescribed period, the Commission may bring the matter before the CJEU.<sup>39</sup> There are numerous examples of the Commission using Article 258 TFEU to ensure that Member States properly implement EU environmental legislation, such as directives like the Waste Framework Directive.

For example, in a recent case against the UK government, the CJEU found a Welsh coal plant, Aberthaw power station, in breach of the nitrogen oxide (NO<sub>x</sub>) emissions limits set out in the Large Combustion Plants Directive (Directive 2010/75).<sup>40</sup> The CJEU judgment confirmed the Commission's finding that the power station had emitted more than double the relevant NO<sub>x</sub> since 2008. Consequently, the United Kingdom is required to take measures necessary to comply with the judgment and if it still fails to act, the Commission may open another infringement procedure under Article 260 TFEU, with only one written warning before referring it back to the CJEU.<sup>41</sup> The CJEU has the power to impose a financial penalty on a non-compliant Member State, depending on the duration and severity of the infringement. Recent examples of penalties being imposed by the CJEU have been against Italy and Greece in the context of the Waste Framework Directive.<sup>42</sup> These cases demonstrate the magnitude of financial penalties that the CJEU may impose on Member States that do not comply with its judgments: Greece was ordered to pay a lump sum of €10 million and €14.52 million for every further six months of non-compliance, and Italy was ordered to pay a €40 million lump sum and €42.8 million for every further six months of non-compliance.

36 Case T-330/18 *Carvalho and Others v. Parliament and Council*.

37 See Article 263, Paragraph 4, TFEU and Case 25/62 *Plaumann & Co. v. Commission* [1963] ECR 95, at 107; and C-583/11 *P. Inuit Tapiriit Kanatami and Others v. European Parliament and Council of the European Union*, ECLI:EU:C:2013:625. The Commission recognises the access to justice concern and in April 2017 issued an interpretative communication aimed at providing clarity on the application of the law; see [http://ec.europa.eu/environment/aarhus/pdf/notice\\_accesstojustice.pdf](http://ec.europa.eu/environment/aarhus/pdf/notice_accesstojustice.pdf), accessed 5 December 2018.

38 See Article 267 TFEU.

39 The Commission's power of enforcement under Article 258 TFEU is discretionary <http://ec.europa.eu/environment/legal/law/procedure.htm>, accessed 5 December 2018.

40 C-304/15, *Commission v. United Kingdom*, ECLI:EU:C:2016:706.

41 The implications of Brexit for UK environmental policy are not covered in this chapter.

42 C-378/13, *European Commission v. Hellenic Republic*, ECLI:EU:C:2014:2405 and C-196/13, *European Commission v. Italian Republic*, ECLI:EU:C:2014:2407.

To facilitate the finding of liability for environmental damage in the European Union as a whole, in 2004 the Environmental Liability Directive<sup>43</sup> (ELD) was adopted,<sup>44</sup> based on the ‘polluter pays’ principle. Under the ELD, operators carrying out dangerous activities<sup>45</sup> have strict liability for environmental damage.<sup>46</sup> Operators carrying out other activities are liable for fault-based damage to protected species or natural habitats, provided there is a causal link.<sup>47</sup> Considering the polluter pays principle, the CJEU recently confirmed that the ELD does not give a basis for Member States to require current owners of polluted sites, who did not themselves cause the pollution, to adopt preventative or remedial measures to deal with the pollution.<sup>48</sup> On 1 June 2017, the CJEU held that the ELD applies *ratione temporis* to environmental damage that occurred after 30 April 2007, even if the damage originated from a facility that was authorised to operate before that date.<sup>49</sup>

## V REPORTING AND DISCLOSURE

EU law does not provide for reporting and disclosure requirements for violation of permits or environmental regulations or contamination on property. This is dealt with at the Member State level. Matters such as whistle-blower protection are also dealt with in national law at a Member State level. There are, however, mechanisms for disclosure of potential environmental liabilities in financial statements and reporting. Under the Non-Financial Reporting Directive, public entities with more than 500 employees should disclose in their management reports relevant and useful information on their policies, main risks and outcomes relating to, among other things, environmental matters.<sup>50</sup> These rules on non-financial reporting were required to be transposed into Member States’ law by 6 December 2016.<sup>51</sup>

43 Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage.

44 On 28 February 2017, the Multi-Annual Work Programme (2017–2020) ‘Making the Environmental Liability Directive more fit for purpose’ has been developed in response to the REFIT evaluation. The goal of the work programme is to make the ELD deliver better on its original objectives (to prevent and to remedy environmental damage based on the polluter-pays principle) and thus to contribute to a better environment by preserving natural resources (biodiversity, water, land) in the European Union. The Multi-Annual Work Programme is aimed to be updated annually to changing developments, growing knowledge and new needs: [http://ec.europa.eu/environment/legal/liability/pdf/MAWP\\_2017\\_2020.pdf](http://ec.europa.eu/environment/legal/liability/pdf/MAWP_2017_2020.pdf), accessed 5 December 2018.

45 Environmental Liability Directive, Annex III.

46 *ibidem.*, see Article 2 et seq.

47 *ibidem.*, Article 3. What constitutes ‘conduct damaging to the environment’ sufficient to be considered ‘criminal’ by Member States is set out in the Environmental Crime Directive (Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law (Text with EEA relevance) OJ L 328, 6.12.2008, pp. 28–37).

48 C-534/13 *Ministero dell’Ambiente e della Tutela del Territorio e del Mare and Others v. Fipa Group srl and Others*, ECLI:EU:C:2015:140.

49 C-529/15 – *Folk*, ECLI:EU:C:2017:419.

50 Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC (Text with EEA relevance) (OJ L 182, 29.6.2013, p. 19), see in particular Articles 19 and 29a.

51 [http://ec.europa.eu/finance/company-reporting/non-financial\\_reporting/index\\_en.htm#related-documents](http://ec.europa.eu/finance/company-reporting/non-financial_reporting/index_en.htm#related-documents), accessed 5 December 2018.

## VI ENVIRONMENTAL PROTECTION

As discussed above, over the years, the European Union has developed a complex regime of environmental protection legislation on air and water quality, chemicals, and solid and hazardous waste, which is law in EU Member States. Other initiatives of the European Union (e.g., concerning single-use plastics) are only at an early stage at present.

### i Air quality

#### *Air Quality Framework Directive*

Directive 2008/50 on ambient air quality and cleaner air for Europe (Air Quality Framework Directive (AQFD))<sup>52</sup> updates and draws into one instrument almost all EU directives on air quality management, including air quality standards and targets for particular pollutants such as SO<sub>2</sub>, NO<sub>x</sub>, lead (Pb), carbon monoxide (CO), benzene, PM-10, PM-2.5 and ozone.

The AQFD first sets up a regime for the monitoring and assessment of ambient air quality, for the collection, exchange and dissemination of air quality information and to better understand the impacts of air pollution for the development of appropriate policies.<sup>53</sup> Air quality assessment occurs in ‘zones of agglomerations’,<sup>54</sup> established by Member States. This allows areas with relatively common air quality characteristics to be assessed together. Physical monitoring is only required in zones where concentrations of relevant pollutants are above certain thresholds set by the Directive.<sup>55</sup> Otherwise, modelling or objective-estimation techniques suffice to generate the relevant data.<sup>56</sup> In all events, scientific methods are central to Member States establishing and meeting their assessment obligations.

The AQFD also sets up an air quality management system<sup>57</sup> using a series of environmental quality standards (EQSs) and targets. These depend on the following parameters: the pollutants at issue, their respective risks to human and environmental health, current knowledge about how to control them and the costs involved in doing this. Different regulatory obligations and consequences attach to each EQS. EQSs include limit values as part of national exposure reduction targets, target values and alert thresholds. Alert thresholds are defined by the AQFD as a level beyond which there is a risk to human health from brief exposure for the population as a whole.<sup>58</sup>

Second, the AQFD requires Member States to draw up air quality plans<sup>59</sup> and short-term action plans,<sup>60</sup> including transboundary air pollution plans, where applicable,<sup>61</sup> for example, where levels of air pollution exceed limits or target values.<sup>62</sup> Such plans must outline how to achieve the limits or target values or appropriate measures to ensure that any exceedance period is minimised. The short-term action plan obligation is triggered by levels of pollutants

52 Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe OJ L 152, 11.6.2008, pp. 1–44.

53 *ibidem.*, Recital 21.

54 Article 4.

55 Annex II.

56 Article 6(3) and (4).

57 Chapter III.

58 Article 2(10).

59 Article 23.

60 Article 24.

61 Article 25.

62 Article 23(1).

exceeding one or more alert thresholds<sup>63</sup> and must contain measures to be taken in the short term to reduce the risk or duration of exceedance of alert thresholds. Where information and alert EQS thresholds are exceeded, the AQFD requires Member States to inform the public and make certain air quality information available to the public.<sup>64</sup>

A recent example of the AQFD's requirements in action was the case brought against the United Kingdom before the CJEU, where the CJEU determined that if a Member State finds that limit values under the Directive cannot be met before the AQFD deadline and seeks a deadline postponement (for a maximum of five years), that Member State is required to make an application for the postponement of the deadline by drawing up an air quality plan demonstrating how those limits will be met before the new deadline.<sup>65</sup> In another recent case brought before the CJEU against Poland, the Court found that Poland had infringed EU law by exceeding the limit values for PM-10 without ensuring in its air quality plans that the period for putting an end to those exceedances was as short as possible.<sup>66</sup> The Commission monitors Member States to ensure they closely adhere to the various targets and standards of the AQFD. The Commission recently sent final warnings to nine Member States (the Czech Republic, Germany, Spain, France, Italy, Hungary, Romania, Slovakia and the United Kingdom) for exceeding air pollution limits.<sup>67</sup>

### ***Industrial emissions***

The Industrial Emissions Directive (IED)<sup>68</sup> sets up a scheme whereby large-scale industrial installations must obtain permits in order to operate. In doing so, it aims to reduce harmful industrial emissions. Around 50,000 installations carrying out the industrial activities listed in the IED<sup>69</sup> are required to operate in accordance with a permit (granted by authorities in Member States),<sup>70</sup> which contain conditions set in accordance with the IED. For example, the permit must take into account the whole environmental performance of the plant (including emissions, use of raw materials and energy efficiency).<sup>71</sup> The emission limit values must be based on best available techniques (BATs).<sup>72</sup> BAT reference documents (BREFs) – published by the Commission – provide information on specific EU industrial sectors, the techniques and processes used in this sector, current emission and consumption levels, techniques to consider in the determination of the BAT and emerging techniques. The Commission has recently published a BREF in respect of large combustion plants.<sup>73</sup>

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63 Article 24(1).

64 Chapter V and Articles 19 and 26.

65 C-404/13, *The Queen, on the application of ClientEarth v. The Secretary of State for the Environment, Food and Rural Affairs*, ECLI:EU:C:2014:2382.

66 C-336/16, *Commission v. Poland*, ECLI:EU:C:2018:94.

67 See [http://europa.eu/rapid/press-release\\_IP-18-348\\_en.htm](http://europa.eu/rapid/press-release_IP-18-348_en.htm), accessed 5 December 2018.

68 Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Text with EEA relevance OJ L 334, 17 December 2010, pp. 17–119.

69 That meet the criteria in Annex I of the IED.

70 Ibidem, Article 4.

71 Article 5 et seq.

72 Article 11.

73 [http://eippcb.jrc.ec.europa.eu/reference/BREF/LCP/JRC107769\\_LCP\\_bref2017.pdf](http://eippcb.jrc.ec.europa.eu/reference/BREF/LCP/JRC107769_LCP_bref2017.pdf), accessed 5 December 2018.

For certain activities, such as large combustion plants, waste incineration and co-incineration plants, solvent-using activities and titanium dioxide production, the IED also sets EU-wide emission values for certain pollutants.<sup>74</sup> National competent authorities may set less strict emission values in specific cases where an assessment shows that achieving the emission level associated with BATs would lead to disproportionately higher costs compared to the environmental benefits owing to geographical location, local environmental conditions or the technical characteristics of the installation.<sup>75</sup> In that regard, the IED contains a certain flexibility for large combustion plants (e.g., a limited lifetime derogation). Finally, the IED requires Member States to set up a system of environmental inspections.<sup>76</sup> Site visits must take place at least every one to three years, using risk-based criteria.<sup>77</sup> The IED requires the public to have access to permit applications, permits and the result of the monitoring of releases.<sup>78</sup>

Industrial emissions are also regulated through the Medium Combustion Plants Directive, which regulates emissions of SO<sub>2</sub>, NO<sub>x</sub> and dust from the combustion of fuels in plants with a rated thermal input equal to or greater than 1 megawatt (MWth) and less than 50MWth.<sup>79</sup>

## ii Water quality

The European Union's regulation of water quality standards is primarily through Directive 2000/60/EC, the Water Framework Directive.<sup>80</sup> Addressing both diffuse and point-source pollution, and establishing binding targets for water quantity and quality in relation to a wide range of water bodies, the Directive is both comprehensive and holistic.<sup>81</sup> There is also issue-specific legislation such as the Directive on environmental quality standards (water policy)<sup>82</sup> and the Directive on groundwater<sup>83</sup> (requiring Member States to take all measures necessary to prevent inputs into groundwater of hazardous substances).

The Water Framework Directive contains four central provisions for pollution control standards in river basin districts – the 'area of land and sea, made up of one or more neighbouring river basins together with their associated groundwaters and costal waters'.<sup>84</sup>

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74 Cited above, Part 4.

75 *ibidem.*, Article 15.

76 Article 23.

77 *ibidem.*

78 Article 24.

79 Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants (Text with EEA relevance) OJ L 313, 28.11.2015, pp. 1–19.

80 Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy.

81 Compare with European Community Water Policy COM (1996) 59 final.

82 Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council. OJ L 348, 24.12.2008, pp. 84–97.

83 Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2000 on the protection of groundwater against pollution and deterioration.

84 The Waste Framework Directive, Article 3(1); Member States must also draw up river basin management plans, either individually or collectively, for transboundary rivers, and publish their plans and send copies to the Commission.

First, Member States ‘aim to achieve’ good surface water status, covering inland, coastal and transitional waters (including both good chemical and ecological status)<sup>85</sup> by ‘ensuring a balance between abstraction and recharging of groundwater’.<sup>86</sup> The CJEU has held that the obligation under the Directive to prevent the deterioration of water and to enhance water quality is legally binding.<sup>87</sup> Second, Member States must ensure that all relevant discharges into surface waters are controlled by emission controls based on best available techniques, applicable emission limit values, or in the case of diffuse impacts, best environmental practices set out in other EU legislation.<sup>88</sup> Member States are also obliged to cease or phase out the discharge, emission or loss of priority hazardous substances and must also progressively reduce intrinsically hazardous substances, such as heavy metals. Finally, measures must be put in place to prevent deterioration in the existing quality of surface and ground waters.<sup>89</sup>

### iii Chemicals

Chemicals are regulated at an EU level by the REACH Regulation.<sup>90</sup> In principle, all chemical substances fall within the scope of that Regulation, whether they are used in industrial processes or day-to-day products, as well as products made of those substances.<sup>91</sup> Moreover, REACH establishes obligations for the entirety of the supply chain. In general, to comply with REACH, companies must identify and manage the risks linked to the substances they manufacture and market or import in the European Union: they have to demonstrate to the European Chemical Agency (ECHA) how the substances can safely be used and must communicate risk management measures to users. If the risk cannot be managed, ECHA, together with the Commission and Member States, can ban hazardous substances or decide to restrict a use or make it subject to prior authorisation.

Regarding registration, companies are required to communicate a detailed registration dossier containing hazard information and, where relevant, an assessment of the risks that the use of the substance may pose and how these risks should be controlled.<sup>92</sup> Registration applies to substances on their own, substances in mixtures and certain cases of substances in articles.<sup>93</sup> Chemical substances that are already regulated by other legislation, such as medicines or radioactive substances, are partially or completely exempted from REACH requirements.<sup>94</sup> Registration is based on the ‘one substance, one registration’ principle, which means that manufacturers and importers of the same substance have to submit their registration jointly.<sup>95</sup> The special transitional regime for substances manufactured or imported at 1 to 100 tonnes per year, known as ‘phase-in’ substances, which were already manufactured or placed on the market before REACH entered into force, lapsed on 31 May 2018.<sup>96</sup> Consequently, as

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85 *ibidem*, Article 4(1)(a)(ii). This was required to be done by the end of 2015.

86 Waste Framework Directive, Article 4(1)(b)(ii).

87 C-461/13, *Bund für Umwelt und Naturschutz Deutschland e.V. v. Bundesrepublik Deutschland*, ECLI:EU:C:2015:433.

88 *ibidem*., Article 10.

89 *ibidem*., Article 4(1)(a)(i).

90 Cited above.

91 *ibidem*., Title I, Chapter 1.

92 REACH Title II, Chapter 2.

93 REACH Title II, Chapters 1 and 2.

94 *ibidem*.

95 REACH Title II.

96 REACH Article 23.



of 1 June 2018, only substances with a valid registration (or exempted from REACH) are allowed on the EU market.<sup>97</sup> Further, substances notified under the Dangerous Substances Directive are considered registered under REACH.<sup>98</sup> The obligation to register substances falls on: the EU manufacturer or importer of substances on their own or in a mixture; EU producers or importers of articles meeting the criteria set out in the guidance on requirements for substances in articles;<sup>99</sup> and ‘only representatives’ established in the European Union and appointed by a manufacturer, formulator or article producer outside the European Union to fulfil the registration obligations of importers.<sup>100</sup> Recently, the CJEU held that substances that have been imported into the European Union but not registered under REACH – and as such are illegally in the European Union but have not been put on the EU market – may be exported outside the European Union to a third state. This export does not violate REACH.<sup>101</sup>

ECHA and Member State representatives then evaluate the information submitted by companies to examine quality of the registration dossiers, any testing proposals, and to clarify whether a given substance constitutes a risk to human health or the environment.<sup>102</sup>

A possible consequence of evaluation is that a substance is required to be authorised. The authorisation procedure aims at assuring that the risks from substances of very high concern (SVHCs) are properly controlled and that these substances are progressively replaced by suitable alternatives.<sup>103</sup> SVHCs are those: meeting the criteria for classification as carcinogenic, mutagenic or toxic for reproduction (CMR substances);<sup>104</sup> are persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB);<sup>105</sup> or are identified on a case-by-case basis, for which there is scientific evidence of probable serious effects that cause an equivalent level of concern as with CMR or PBT/vPvB substances.<sup>106</sup> It has recently been clarified that ECHA’s decisions to identify substances as SVHCs produces legal effects in relation to third parties because they give rise to, among other things, information obligations.<sup>107</sup> After a two-step regulatory process, SVHCs may be included in the Authorisation List and become subject to authorisation.<sup>108</sup> These substances cannot be placed on the market or used after a given date, unless an authorisation is granted for their specific use, or the use is exempted from authorisation.<sup>109</sup> Manufacturers, importers or downstream users of a substance on the Authorisation List can apply for authorisation.<sup>110</sup>

97 See e.g. <https://echa.europa.eu/-/300-people-gather-in-helsinki-for-last-minute-advice-ahead-of-the-final-registration-deadline-for-chemicals>, accessed 5 December 2018.

98 REACH Title I.

99 ibidem.

100 ibidem.

101 C-535/15, *Freie und Hansestadt Hamburg v. Jost Pinckernelle*, ECLI:EU:C:2017:315.

102 REACH Title IV.

103 Article 55 et seqq.; a recent case (C-106/14, *Fédération des entreprises du commerce et de la distribution (FCD) and Fédération des magasins de bricolage et de l’aménagement de la maison (FMB) v. Ministre de l’écologie, du développement durable et de l’énergie*, ECLI:EU:C:2015:576) has clarified the scope of the duty to notify under REACH in respect of SVHCs.

104 REACH Title V.

105 REACH Annex XIII.

106 REACH Title VII.

107 C-290/13 *P. Rütgers Germany GmbH and Others v. European Chemicals Agency*, ECLI:EU:C:2014:2174.

108 ibidem.

109 REACH Title VII, Chapter 2.

110 REACH Title VII.

Moreover, Member States, or ECHA on request of the Commission, can propose restrictions, that is to say limiting or banning the manufacture, placing on the market or use of a substance, if it is felt that a risk needs to be addressed on an EU-wide basis.<sup>111</sup> A restriction applies to any substance on its own, in a mixture or in an article, including those that do not require registration.<sup>112</sup> It can also apply to imports.<sup>113</sup> ECHA can also propose a restriction on articles containing substances that are in the Authorisation List.<sup>114</sup> In the course of the restriction process, ECHA works with experts from the Member States to provide scientific opinions on any proposed restriction that will help the Commission, together with the Member States, to take the final decision.<sup>115</sup>

#### iv Solid and hazardous waste

The overarching regime for the European Union's regulation of waste is the Waste Framework Directive.<sup>116</sup> The definition of 'waste' for the purpose of the Directive is crucial as the Directive's prescriptions and regulatory controls only apply to waste, but this also creates difficulties. Waste is defined in the Directive as 'any substance or object which the holder discards or intends or is required to discard'.<sup>117</sup> In its Guidance on the Interpretation of the Waste Framework Directive, the Commission gives examples in respect of the three alternatives of 'discarding':

- a* 'discard' includes items thrown into a waste bin or the transfer of material from a company to a waste collector;
- b* 'intention to discard' includes an operating site that indicates that it will send off-site for appropriate disposal or recovery any of its stock of raw materials that cannot be returned; and
- c* 'requirement to discard' includes stockpiles of banned pesticides that must be discarded and therefore must be managed as waste.

The Directive makes certain exclusions from the scope of waste, such as gaseous effluents emitted into the atmosphere, land (*in situ*) and uncontaminated soil.<sup>118</sup> It also excludes from its scope certain materials to the extent they are covered by other EU legislation – including wastewater, animal by-products and carcasses, and mining waste.<sup>119</sup> By-products of industrial processes also do not constitute waste if further use of the substance or object is certain, can be used directly without any further normal industrial processing, is produced as an integral

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111 REACH Title VIII.

112 *ibidem*.

113 *ibidem*.

114 *ibidem*.

115 *Ibidem*. For a list of adopted opinions see <https://echa.europa.eu/previous-consultations-on-restriction-proposals>, accessed 5 December 2018.

116 Cited above.

117 *ibidem*., Article 3(1); the definition of 'waste' has been subject to extensive and complex interpretation by the CJEU, as well as national courts, from the late 1980s to the present day, in particular as to the meanings of 'discard', 'intention to discard' and 'requirement to discard'.

118 Wastewater Framework Directive, Article 2.

119 *ibidem*.

part of the production process and further use is lawful.<sup>120</sup> Finally, material ceases to be waste if it meets certain ‘end-of-waste’ criteria, such as whether a market exists for the material, or if it has undergone a recovery, including recycling, operation.<sup>121</sup>

The fundamental obligations on Member States in respect of waste under the Directive are twofold. First, they must take measures to ensure that waste management is carried out without endangering human health or without harming the environment.<sup>122</sup> Second, they must take measures to prohibit the abandonment, dumping or uncontrolled management of waste.<sup>123</sup> The Directive also shapes waste policy in Member States by setting out a ‘waste hierarchy’, which provides ‘a priority order in waste prevention and management legislation and policy’.<sup>124</sup> In descending order, the hierarchy is: waste prevention; preparing for reuse; recycling; other recovery such as energy recovery; and disposal. Waste management obligations on Member States, which apply in respect of waste producers or other holders, are also set out.<sup>125</sup>

Stringent controls for hazardous waste (including, among other things, waste that is oxidising, flammable, toxic, ecotoxic, carcinogenic, mutagenic, corrosive or infectious) are also applied.<sup>126</sup> Hazardous waste cannot be mixed or diluted, unless a business has a waste management permit, the operation conforms to the best available techniques and there is no increased adverse impact on human health or the environment.<sup>127</sup>

Recent CJEU cases have shown that certain Member States have not only failed to implement the Directive,<sup>128</sup> but also have failed to comply with CJEU judgments resulting from infringement proceedings (see Section III, *supra*) requiring them to adopt necessary measures to act in accordance with the Directive.<sup>129</sup> The Waste Framework Directive has a

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120 Wastewater Framework Directive, Article 5.

121 Wastewater Framework Directive, Article 6.

122 Wastewater Framework Directive, Article 13.

123 Wastewater Framework Directive, Article 36.

124 Wastewater Framework Directive, Article 4(1).

125 Wastewater Framework Directive, Article 15.

126 Wastewater Framework Directive, Article 3(2) and Annex III.

127 Wastewater Framework Directive, Articles 17, 18(1) and 35.

128 For example, in June 2018, the Commission decided to refer Spain to the CJEU for failing to establish or revise waste management plans under the Waste Framework Directive. See [http://europa.eu/rapid/press-release\\_IP-18-3987\\_en.htm](http://europa.eu/rapid/press-release_IP-18-3987_en.htm), accessed 5 December 2018.

129 See, for example, C-378/13, *European Commission v. Hellenic Republic*, ECLI:EU:C:2014:2405 and C-196/13, *European Commission v. Italian Republic*, ECLI:EU:C:2014:2407. The Commission issued a report on 27 February 2017 assessing the implementation of the Waste Framework Directive (2010–2012): <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2017:0088:FIN>, accessed 5 December 2018.

series of ‘daughter’ directives: producer responsibility regimes such as under the Packaging Waste Directive,<sup>130</sup> the End-of-Life Vehicles Directive,<sup>131</sup> Batteries Directive<sup>132</sup> and a separate Waste Shipment Regulation.<sup>133</sup>

## **v Plastics**

In January 2018, the Commission adopted an EU-wide strategy on plastics, including a plan to make all plastic packaging on the EU market recyclable by 2030, a reduction of single-use plastics and restrictions on the use of microplastics. The Commission also adopted a Monitoring Framework, composed of a set of 10 indicators, which will measure progress towards the transition to a circular economy at EU and national levels.

On 28 May 2018, the Commission issued a proposal for a Directive banning or reducing 10 single-use plastics causing marine litter.<sup>134</sup> Where alternatives are readily available and affordable, the Commission proposes to ban single-use plastic products from the EU market. For products without straightforward alternatives, the Commission proposes to limit their use through a national reduction in consumption, design and labelling requirements, and waste management or clean-up obligations for producers. At the time of writing, the proposal was being discussed among the institutions (the Commission, the European Parliament and the Council).

## **vi Contaminated land**

Land contamination is not regulated at EU level. The Commission had proposed a Soil Framework Directive in September 2006 aimed at filling this gap and providing a common strategy for the protection and sustainable use of soil.<sup>135</sup> However, after almost eight years without the proposal being enacted into legislation, the Commission withdrew it in April 2014, with the aim of proposing legislation again in the future.<sup>136</sup>

# **VII CLIMATE CHANGE**

The European Union considers itself to be a global leader in limiting emissions, decarbonising economies and other measures to limit global warming. To this end, the European Union

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130 European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

131 Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of-life vehicles (OJ L 269, 21.10.2000, p. 34). The Commission issued a report on 27 February 2017 assessing the implementation of the End-of-Life Vehicles Directive (2008-2011 and 2011-2014): <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52017DC0098> accessed 5 December 2018.

132 Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC OJ L 266, 26 September 2006, pp. 1–14.

133 Regulation (EC) No. 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste.

134 See [http://ec.europa.eu/environment/circular-economy/pdf/single-use\\_plastics\\_proposal.pdf](http://ec.europa.eu/environment/circular-economy/pdf/single-use_plastics_proposal.pdf), accessed 5 December 2018.

135 [http://ec.europa.eu/environment/soil/process\\_en.htm](http://ec.europa.eu/environment/soil/process_en.htm), accessed 5 December 2018.

136 *ibidem*.

has signed the UNFCCC and Kyoto Protocol, along with its Member States, and has taken a leading role in climate change negotiations (including forming a high ambition coalition in the Paris Agreement negotiations).<sup>137</sup>

Internally, the European Union has adopted as a central policy the '2030 Climate and Energy Package',<sup>138</sup> a range of climate change measures with three key targets: achieving a 40 per cent cut in greenhouse gas emissions (from 1990 levels), 27 per cent of EU energy from renewables and 27 per cent improvement in energy efficiency.

The package includes the Renewable Energy Directive,<sup>139</sup> which sets binding national renewable energy targets for Member States,<sup>140</sup> and the Energy Efficiency Directive.<sup>141</sup> In addition, an Effort Sharing Decision<sup>142</sup> sets differential caps for Member State emissions from sectors falling outside the EU emissions trading scheme, amounting overall to a 10 per cent cut in those emissions by 2020, and the Carbon Capture and Storage Directive<sup>143</sup> establishes a legal framework for environmentally safe geological storage of CO<sub>2</sub>. Further, in November 2017, the Commission proposed a new set of targets concerning the transport sector and more specifically, to lower the EU average of CO<sub>2</sub> emissions of new passenger cars and vans through the Clean Mobility Package.<sup>144</sup> The Commission recently proposed a new long-term strategy to reach a climate-neutral economy by 2050.<sup>145</sup> To reach a climate-neutral economy, the Commission proposes pursuing joint action in seven strategic areas:

- a* energy efficiency;
- b* deployment of renewables;
- c* clean, safe and connected mobility;

137 [http://ec.europa.eu/clima/policies/international/negotiations/paris\\_en](http://ec.europa.eu/clima/policies/international/negotiations/paris_en), accessed 5 December 2018.

138 [http://ec.europa.eu/clima/policies/strategies/2030\\_en](http://ec.europa.eu/clima/policies/strategies/2030_en), accessed 5 December 2018.

139 Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (Text with EEA relevance) OJ L 140, 5 June 2009, pp. 16–62.

140 It was recently reported that 11 EU Member States have already achieved their 2020 targets on the share of energy from renewable sources in gross final consumption of energy. Sweden had the highest share in 2016 (53.8 per cent), ahead of Finland (38.7 per cent), Latvia (37.2 per cent), Austria (33.5 per cent) and Denmark (32.2 per cent). The lowest proportions of renewables were registered in Luxembourg (5.4 per cent), Malta and the Netherlands (both 6 per cent). See <https://ec.europa.eu/eurostat/documents/2995521/8612324/8-25012018-AP-EN.pdf/9d28caef-1961-4dd1-a901-af18f121fb2d>, accessed 5 December 2018.

141 See Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, also <https://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition>, accessed 5 December 2018.

142 [https://ec.europa.eu/clima/policies/effort\\_en](https://ec.europa.eu/clima/policies/effort_en), accessed 5 December 2018.

143 Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No. 1013/2006 (Text with EEA relevance) OJ L 140, 5 June 2009, pp. 114–135.

144 The overall targets for a low-emission mobility sector have been presented by the Commission in a Communication. This set of new measures includes: a proposal for a Regulation on new emission performance standards for new passenger cars and for new light commercial vehicles, the Clean Vehicle Directive, an Action Plan for the deployment of alternative fuels infrastructure across Europe, the Combined Transport Directive, the Directive on Passenger Coach Services and the battery initiative. See [https://ec.europa.eu/transport/modes/road/news/2017-11-08-driving-clean-mobility\\_en](https://ec.europa.eu/transport/modes/road/news/2017-11-08-driving-clean-mobility_en), accessed 14 December 2017.

145 [http://europa.eu/rapid/press-release\\_IP-18-6543\\_en.htm](http://europa.eu/rapid/press-release_IP-18-6543_en.htm), accessed 5 December 2018.

- d* competitive industry and circular economy;
- e* infrastructure and interconnections;
- f* bio-economy and natural carbon sinks; and
- g* carbon capture and storage to address remaining emissions.<sup>146</sup>

The centrepiece of the European Union's environmental and climate change regime is the EU ETS.<sup>147</sup> More than 11,000 power stations and industrial plants in 31 countries (28 EU Member States and three EEA/EFTA states), as well as from aviation activities, fall within its scope of greenhouse gas emissions reduction.<sup>148</sup> In practice, this means that the EU ETS covers around 45 per cent of the European Union's greenhouse gas emissions.<sup>149</sup> In the simplest terms, the EU ETS is a 'cap and trade' system. It works by putting a limit on overall emissions from industry sectors emitting high levels of greenhouse gases, and the limit is reduced over time. Within that limit, companies may buy and sell emission allowances as needed. Each allowance represents the right to emit one tonne of carbon dioxide equivalent (CO<sub>2</sub>e) emissions. The number of allowances issued determines the volume of emissions permitted, and in that way emissions are 'capped'. The idea is that the cap – and thus emissions – is reduced over time.<sup>150</sup> Allowances are distributed, by allocation or auction,<sup>151</sup> to installations and can be freely traded on the market. Each year, installations must surrender allowances equivalent to the amount of CO<sub>2</sub> emitted. In this way, the price is (at least partially) determined by the market.<sup>152</sup>

For installations to receive free allowance allocations, they must meet the relevant sector's benchmarks.<sup>153</sup> For those installations that are not at a significant risk of carbon leakage, free allowances decline annually, to 30 per cent of all allowances in 2020 and no free allowances available in 2027.<sup>154</sup> The power generation sector is not eligible for free allocation, except under special conditions in a few Member States.

A market stability reserve will start operating in January 2019, which aims to address the current surfeit of allowances and make the EU ETS resilient to shocks by allowing the supply of allowances to be auctioned to be subject to adjustment.<sup>155</sup> Phase 4 of EU ETS for 2021 to 2030 has recently been published.<sup>156</sup> Phase 4 focuses on (1) strengthening the EU ETS as an investment driver by increasing the pace of annual reductions in allowances to 2.2 per cent

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146 The Commission strategy does not set targets or propose new initiatives to be taken. The purpose of the strategy is to start an EU-wide debate, which should allow the European Union to adopt a strategy by early 2020 for the UNFCCC, as requested under the Paris Agreement.

147 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (Text with EEA relevance).

148 Notably CO<sub>2</sub>, N<sub>2</sub>O, methane, HCFCs and PFCs.

149 [http://ec.europa.eu/clima/policies/ets\\_en](http://ec.europa.eu/clima/policies/ets_en), accessed 5 December 2018.

150 EU ETS Directive, cited above, Recitals.

151 *ibidem.*, Article 10. Allowances are either auctioned or allocated for free to address international competitiveness concerns of industry sectors that are deemed to be exposed to carbon leakage under the EU ETS Directive.

152 EU ETS Directive, Articles 3 and 5–7.

153 EU ETS Directive, Article 10(a)(12).

154 EU ETS Directive, Article 10(a)(11).

155 [https://ec.europa.eu/clima/policies/ets/reform\\_nl](https://ec.europa.eu/clima/policies/ets/reform_nl), accessed 5 December 2018.

156 [http://ec.europa.eu/clima/policies/ets/revision\\_en](http://ec.europa.eu/clima/policies/ets/revision_en), accessed 5 December 2018. On 9 November 2017, the Commission and the European Parliament reached a political agreement on the revision of the ETS for

as of 2021 and reinforcing the above-mentioned market stability reserve; (2) continuing the free allocation of allowances as a safeguard for the international competitiveness of industrial sectors at risk of carbon leakage; and (3) helping industry and the power sector to meet the innovation and investment challenges of the low-carbon transition via several low-carbon funding mechanisms.

## VIII OUTLOOK AND CONCLUSIONS

As part of the European Union's holistic approach to environmental sustainability, and in order to implement the European Union's 2030 climate and energy framework, the Commission introduced a 'Clean Energy For All' Package on 30 November 2016, also known as the Winter Package, which contains eight proposals, covering energy efficiency, renewable energy, the design of the electricity market and governance rules for the Energy Union, as well as buildings and transport.<sup>157</sup> The Commission considers that these proposals will elevate clean energy as the prime growth sector for the future in the European Union. The Energy Performance in Buildings Directive entered into force on 9 July 2018.<sup>158</sup> The proposed rules on renewables, energy efficiency and governance of the Energy Union have recently been approved by the European Parliament, but still had to be formally approved by the Council at the time of writing.<sup>159</sup> With the Paris Agreement ratified and the European Union's recent role in getting the global rulebook on the implementation of the Paris Agreement adopted,<sup>160</sup> the European Union continues to chart its course for a low-carbon economy, with a global effort alongside. Financing climate adaptation<sup>161</sup> and stabilising global temperatures is only a small part of the European Union's environmental challenges in the new global economy. Climate change, globalisation and demographic change have the potential to 'profoundly change the context of policy-making in the future'.<sup>162</sup> The European Union's plan beyond 2020 must reflect this.<sup>163</sup>

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the period after 2020. The text will now have to be formally approved by the European Parliament and the Council, see [https://ec.europa.eu/clima/news/eu-emissions-trading-system-landmark-agreement-between-parliament-and-council-delivers-eus\\_en](https://ec.europa.eu/clima/news/eu-emissions-trading-system-landmark-agreement-between-parliament-and-council-delivers-eus_en), accessed 5 December 2018.

157 <https://ec.europa.eu/jrc/en/news/energy-package-clean-energy-all-europeans>, accessed 5 December 2018.

158 Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency, available here: [https://eur-lex.europa.eu/legal-content/EN/TXT/?toc=OJ%3AL%3A2018%3A156%3ATOC&uri=uriserv%3AOJ.L\\_.2018.156.01.0075.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?toc=OJ%3AL%3A2018%3A156%3ATOC&uri=uriserv%3AOJ.L_.2018.156.01.0075.01.ENG), accessed 5 December 2018.

159 [http://europa.eu/rapid/press-release\\_IP-18-6383\\_en.htm](http://europa.eu/rapid/press-release_IP-18-6383_en.htm), accessed 5 December 2018.

160 On 7 November 2017, the Commission published a report assessing the progress made towards meeting the European Union's climate commitments two years after the adoption of the Paris Agreement: COM(2017) 646 final of 7 November 2017 'Two years after Paris, progress towards meeting the EU's climate commitments'.

161 See also the recent Commission report on the implementation of the EU Strategy on adaptation to climate change: COM(2018) 738 final of 12 November 2018.

162 [www.eea.europa.eu/environmental-time-line/the-next-50-years](http://www.eea.europa.eu/environmental-time-line/the-next-50-years), accessed 5 December 2018.

163 [http://ec.europa.eu/environment/action-programme](https://ec.europa.eu/environment/action-programme), accessed 5 December 2018.

# FRANCE

*Christian Huglo*<sup>1</sup>

## I INTRODUCTION

The recent environmental and climate change policy in France has focused on two objectives: protecting biodiversity and ensuring a successful energy transition.

The Law on the Recovery of Biodiversity, Nature and Landscapes of 8 August 2016<sup>2</sup> is based on a number of principles: ‘avoid, reduce, compensate’; non-regression in environmental matters; ecological solidarity and the protection of biodiversity; and new legal redress mechanisms to provide compensation for ecological damage and prevent environmental damage before it takes place, as well as helping to prepare projects that may harm the environment so as to mitigate such issues in advance.

The 2015 Energy Transition Act<sup>3</sup> aims to promote renewable energy and reduce nuclear energy in electricity production. France is still far behind its objectives regarding the development of renewable energy.

## II LEGISLATIVE FRAMEWORK

Today, the main source of legislation relating to environmental protection and climate change is the 2001 Environmental Code, but the main instruments of environmental law were previously the work of the judge, either judicial or administrative, namely the ecological impact assessment or environmental impact assessment, based on the National Environmental Policy Act 1969.<sup>4</sup> In addition to the French Environmental Code, there is also the Environmental Charter,<sup>5</sup> enclosed in the French Constitution, which is under the control of the Constitutional Council. After proclaiming the right to a healthy environment, the Environmental Charter contains the main founding principles of environmental law: prevention, precaution, polluter pays, and the right to participation and information in environmental matters.

The Environmental Code concerns, on the one hand, the protection of essential elements of the environment (air, water, climate, fauna, flora and landscapes) and, on the other hand, the rules concerning pollution control (Book 5). The first provisions are

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1 Christian Huglo is a founding partner at Huglo Lepage Avocats. The author would like to thank Chancia Plaine, jurist at Huglo Lepage, for her contribution to this chapter.

2 Law No. 2016-1087 of 8 August 2016 on the Recovery of Biodiversity, Nature and Landscapes, NOR: DEVL1400720L.

3 Law No. 2015-992 of 17 August 2015 on the Energy Transition for Green Growth, NOR: DEVX141313992L.

4 National Environmental Policy Act, 42 U.S.C. Section 4321 et seq. (1969).

5 Constitutional Act No. 2005-205 of 1 March 2005 on the Environmental Charter, NOR: JUSX0300069L.



Books 2, 3 and 4 of the Environmental Code, which is composed of seven books (including two devoted to the French Overseas Territories). The first book is thus composed of the following generic provisions:

- a* general principles (Title I);
- b* information and participation of citizens (Title II);
- c* institutions active in the field of environmental protection (Title III);
- d* the role of environmental protection associations and local authorities (Title IV);
- e* general taxes on polluting activities (Title V);
- f* the prevention and remedying of certain damage caused to the environment (Title VI);
- g* common provisions on administrative controls and criminal penalties (Title VII); and
- h* administrative procedures relating to environmental authorisation (Title VIII).

Book 5 concerns, in particular, establishments that are dangerous to the environment, chemicals, waste, genetically modified organisms, biocides, nanotechnologies and nuclear safety, but also protection against natural hazards and noise pollution, as well as regulations concerning advertising boards and outdoor advertising.

French domestic law is strongly influenced by EU law, which encompasses the same subjects and has been inspired, since the 1980s, by the major systems of French law. Regarding climate change, Article L. 229-1 of the Environmental Code states: 'The fight against the intensification of the greenhouse effect and the prevention of risks linked to global warming are recognized as national priorities.' The following provisions deal with the National Observatory on the Effects of Global Warming, the issue of quotas and, above all, the issue of planning at the local and national levels.

Finally, by virtue of Article 55 of its Constitution, France recognises the superiority of treaties over domestic law, and applies and recognises many international conventions that have direct effect, such as the Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters; the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal; a large number of conventions on air pollution, the law of the sea and the law of protected species; and the Paris Agreement. In total, France has ratified more than 300 environmental treaties or conventions.

### III THE REGULATORS

The Ministry of Ecological and Inclusive Transition enforces the main policy regarding themes of environmental law and issues relating to spatial planning and energy law.<sup>6</sup> It consists of two agencies, each with a relatively important role to play.

First, there is the Environment and Energy Management Agency, a public institution of the state whose statutes and powers are described in Article L. 131-2 of the Environmental Code. Its mission is to prevent and fight against air pollution, prevent waste production, reorganise and monitor waste storage facilities, achieve savings in energy and raw materials, develop clean and efficient energy-related techniques, fight against noise pollution and coordinate at a local level the water agencies in their area of common interest.

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<sup>6</sup> Decree No. 2008-680 of 9 July 2008 on the Organisation of the Ministry of Ecology, Energy, Sustainable Development and Town and Country Planning, NOR: DEVK0815768D.

Second, there is the French Agency for Biodiversity, which was created by Law No. 2016-1087. Its mission is to ensure the preservation, management and restoration of biodiversity; the development of knowledge concerning the resources used and ecosystem services related to biodiversity; balanced and sustainable water management; and the fight against biopiracy. It also plays an administrative role over the application of Law No. 2016-1087.

The most important aspects of environmental litigation are devolved to the administrative courts, which are organised in three levels: the administrative courts, the administrative courts of appeal and the Council of the State, which has the general role as judge of cassation and may be directly involved in some important cases at the national level. The procedure before the administrative courts is essentially written and inquisitorial, and is in accordance with the principle of adversarial proceedings. The courts of the judicial order attached to the Court of Cassation (courts and courts of appeal) judge disputes between private persons and those relating to the environmental liability of private persons for nuisance or pollution. Law No. 2016-1087 of 8 August 2016 on the Recovery of Biodiversity, Nature and Landscapes legalised the principle of compensation in kind for ecological damage; the rules relating to this dispute are contained in Articles 1246 et seq. of the Civil Code.

#### IV ENFORCEMENT

The above-mentioned jurisdictional mechanism is an effective device in the case of a violation of environmental laws and regulations or damage to the environment. The creative and interpretative role of judges must also be emphasised as the law of impact studies and the right of compensation for ecological damage both result from decisions of first degree courts, preceding the Environmental Code.<sup>7</sup>

Anyone with a direct, material and certain interest may take legal action, whether a legal person, individual, local government, association or company. For associations, the statutes must be precise and aim at the very object of the dispute. Litigation generally arises from the initiative of civil society. In principle, access to justice is free of charge, but costs and expenses can be significantly incurred, and all corporations or legal persons, even under public law (local authorities, departments and regions) except the state, may be sued in criminal courts.

The European Court may be seized – after exhaustion of domestic remedies – for violation of the principles and rules established by the European Convention on Human Rights, which is based on the model of the 1948 Universal Declaration of Human Rights, and has been interpreted by it as applying to the protection of the environment. Two articles are generally invoked: Article 2 (the right to life) and Article 8 (the right to domicile). The Court of Justice of the European Union (CJEU) allows the interpretation, on its side in particular, of the European Union's numerous directives on the environment and on the reference for a preliminary ruling by national courts.

This jurisdictional system is important but does not operate on a system of oral evidence, which is testimonial; on technical matters it operates on the expert opinion procedure, which is very strictly regulated. However, the judge is not definitively bound by the expert's decisions.

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<sup>7</sup> Case concerning the pollution of the Mediterranean, and the pollution of the Rhine; see Christian Huglo, *Avocat pour l'environnement*, LexisNexis, 2013.

## V REPORTING AND DISCLOSURE

The issue of environmental information is rooted in the highest level of law: constitutional law (Article 7 of the 2005 Environmental Charter). This right is generally exercised according to a very precise system allowing the referral to a committee that sits under the Prime Minister: the Administrative Documents Access Commission (CADA). Any citizen wishing to obtain a document relating to an environmental issue may make a written request to the authority concerned and, in the event of refusal after the CADA's decision, refer the matter to the administrative tribunal.

Parliamentary committees of inquiry in France have often been assembled on several environmental issues: they are intended to enlighten both Parliament and citizens. However, they do not have the same power as in common law countries. With regard to cases of violation of environmental regulations or permits issued by the administrative authority, most are placed under the jurisdiction of the administrative courts and the appeal must be lodged within a very short period: two months from the date of publication or notification of the administrative act unless otherwise specified.

Regarding the litigation of soil contamination, there is a wealth of case law punishing the lack of information or compliance of land polluted by waste or former industrial activities carried out under the legislation on classified installations for the protection of the environment. With regard to the environmental information obligations, the essentials are found in the Environmental Code and in Title II of Book I.

Recent case law of the Counsel of the State also considers that responsibilities generally extend to the last operator and exceptionally also to the owner of the land. The actions must result in full restoration or compensation for the damage caused; waste liability is treated in the same way, but only concerns the obligation to dispose of the waste and not necessarily the restoration of the site.

Climate litigation involving expert opinions about to become effective in France and Europe include the *Urgenda* climate case, and what has been called *The People's Climate Case*, filed by 10 families across the European Union. The *Urgenda* case, which is a Dutch case, has recently been confirmed by The Hague Court of Appeal of 9 October 2018. It calls into question the responsibility of the Dutch state for insufficient measures taken against global warming.<sup>8</sup> *The People's Climate Case* is directed against the European Commission. In France, one litigation is currently planned against the French state for failure to act, and another has been filed against Total S.A. for failing to provide an information report on its action about climate change. The commune of Grande-Synthe (23,000 inhabitants) undertook an action similar to the *Urgenda* action at the end of November 2018, but this must take place before the administrative court

## VI ENVIRONMENTAL PROTECTION

### i Air quality

Air quality management must be distinguished from emission control even though regulation of emission sources is necessary to achieve quality standards.

The legislative and regulatory framework for air protection was introduced in France by the Law on Air and Rational Use of Energy of 30 December 1996, which makes Regional

<sup>8</sup> See Christian Huglo, *Le contentieux climatique: une révolution judiciaire mondiale*, Bruylant, 2018, p. 396.

Air Quality Plans mandatory, replaced since then by the Regional Climate, Air and Energy Schemes resulting from Law No. 2010-788 of 12 July 2010 on National Environmental Commitment), the Atmospheric Protection Plans and the 'air' section of the Urban Travel Plans.

Article L. 220-2 of the Environmental Code defines atmospheric pollution. The right of everyone to breathe air that does not harm their health has been set out in Act No. 96-1236 of 30 December 1996, and is listed in Article L. 220-1 of the Environmental Code. This principle has been constitutionalised and enshrined in the Environmental Charter.<sup>9</sup> Indeed, Article 1 of the Environmental Charter also provides that 'everyone has the right to live in a balanced environment that respects health'. If it can be directly invoked before the judge in the context of a dispute, Article 1, like all the other articles of the Charter, is addressed first and foremost to the public authorities and the legislator, who must ensure that this right is protected. It should be read in conjunction with Article 1 of the Air Act, which recognises the right of everyone to breathe clean air. Air pollution seriously affects health; in France, the number of deaths attributed to air pollution is at least 45,000 per year, according to the European Environment Agency.

The measures for the Plan for the Protection of the Atmosphere must be elaborated by the state representative (prefect) in municipalities with more than 250,000 inhabitants. This plan also aims to implement traffic restriction measures. In February 2018, France sent the European Commission the elements of its action plan, which aims to guarantee breathable air for all French people. This approach is linked to the decision handed down in July 2017 by the Counsel of the State,<sup>10</sup> which held the state responsible for persistent violations of the concentration limit values for fine particles (PM) and nitrogen dioxide (NO<sub>2</sub>) in several areas of the national territory. The High Administrative Court requested the French state to implement an effective air pollution control strategy by 31 March 2018. On 13 April, in a press release, Nicolas Hulot, former Minister of Ecological and Inclusive Transition, published the roadmaps on air pollution, drawn up by the regional prefects of the areas concerned by the exceeding of air pollution thresholds. These roadmaps set out actions to improve air quality in the 14 areas<sup>11</sup> particularly affected by air pollution.<sup>12</sup> For example, the public authorities of the Ile-de-France region (Paris)<sup>13</sup> have committed themselves as climate, air and energy leaders for the period 2018 to 2022.

Nicolas Hulot also welcomed the development of measures such as the vehicle conversion bonus (which allows French people who want to buy a new or recently used car emitting less than 130 gCO<sub>2</sub>/km to receive aid of up to €1,000 by scrapping an old polluting vehicle; this bonus is doubled for non-taxable households) or the successful deployment of

9 Constitutional Act No. 2005-205 of 1 March 2005 on the Environmental Charter, NOR: JUSX0300069L.

10 CE, 12 juillet 2017, *Association Les Amis de la Terre France*, No. 394254.

11 The 14 cities that have submitted air quality roadmaps are in the following administrative monitoring zones: Fort-de-France, Grenoble, Lyon, Marseille-Aix, Montpellier, Nice, Paris, Reims, Saint-Étienne, Strasbourg, Toulon, Toulouse, Vallée de l'Arve and Vallée du Rhône.

12 For a map of roadmaps defining actions to improve air quality in the 14 areas particularly affected by air pollution, see: [https://umap.openstreetmap.fr/fr/map/feuilles-de-route-qualite-de-lair\\_208822#5/48.575/7.734](https://umap.openstreetmap.fr/fr/map/feuilles-de-route-qualite-de-lair_208822#5/48.575/7.734).

13 For the roadmap for air quality in the Ile-de-France region, see: <https://www.ecologique-solidaire.gouv.fr/sites/default/files/IDF%20feuille%20de%20route.pdf>.

the Crit'Air system, a secure sticker to be affixed to the vehicle that indicates its environmental class according to its emissions of atmospheric pollutants, making it possible to favour the least polluting vehicles.

The Commission brought an action before the CJEU against France for 'non-compliance with the limit values for NO<sub>2</sub> and for failure to take appropriate measures to shorten the periods of exceedance as much as possible'. France would be expected to now review its solutions to fight against the sources of atmospheric pollution.

## ii Water quality

Water law in France is characterised by its complexity because both the statute and legal regime are related to the right of ownership. Under the Civil Code, water is considered a common good (*res communis*). The legislator did not elaborate a water code, and there is no legal definition of the term 'right to water'. The legal regime applicable to water is found in several codes. Three important laws have made it possible to establish the basis of a positive right to water. The first legislation against pollution of surface and groundwater was Law No. 64-1245 of 16 December 1964 on the regime and distribution of water and the fight against pollution, which established the legal framework for the regulation of water resources by dividing France into six river basins. The second was Law No. 92-3 of 3 January 1992 on Water, which harmonised the legal regime for water management. Finally, Act No. 2006-1772 of 30 December 2006 on Water and Aquatic Environments recognised the priority use of water for human consumption and established a right of access for all to drinking water. The main texts on this subject are codified in Title 1 of Book II 'Water and aquatic environments' of the Environmental Code. Article L. 211-1 guarantees the principle of balanced and sustainable water management, and Article L. 210-1 of the Environmental Code implicitly grants the state the right to organise the use of this water for the benefit of other people than solely the locals.

To this must be added EU law, which constitutes an essential source of water law, as well as international conventions. France transposed Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000, establishing a framework for Community action in the field of water policy by Act No. 2004-338 of 21 April 2004. This directive reflects the will of the Member States to harmonise their water legal systems.

There are several organisations responsible for water management. Placed under the authority of the Minister of Ecological and Inclusive Transition, the Water Department's<sup>14</sup> mission is to develop and monitor the application of the rules relating to the water regime. The National Water Committee, an advisory body whose secretariat is taken up by the Water Department, gives its opinion on the projects of development and distribution of waters with a national character, on large regional arrangements or on the quality of the public services of water distribution.<sup>15</sup> In addition to the regional water agencies (one per river basin), the French Biodiversity Agency,<sup>16</sup> a public administrative body, ensures balanced and sustainable water management and promotes the coherence of other policies that would have an impact on biodiversity and water.

14 Decree No. 2008-680 of 9 July 2008 on the organisation of the central administration of the Ministry of Ecology, Energy, Sustainable Development and Town and Country Planning, NOR: DEVK0815768D.

15 C. env., Article L. 213-1.

16 Law No. 2016-1087 of 8 August 2016 on the Recovery of Biodiversity, Nature and Landscapes: Article 23.

The legislator organises water management through two types of urban planning documents: the Main Plan for Water Development and Management (SDAGE) and the Water Development and Management Plan (SAGE). The 2006 law strengthens the legal scope of the SAGE by giving it the status of a document with regulatory value. Several specialised institutions in the field of water management ensure its management: the water basins whose prefects are coordinators, the basin committees that develop the SDAGEs, as well as the water agencies that implement the principle of balanced and sustainable management of water resources. Finally, a local water commission is created by the prefect to review and monitor the application of the SAGE.

### iii Chemicals

The general law relating to chemicals and dangerous industrial activities appeared in the nineteenth century, first by the decree of 15 October 1810 on insalubrious, inconvenient or dangerous factories and workshops, then by the amended law of 19 December 1917 on dangerous, insalubrious or inconvenient establishments, and finally by Law No. 76-633 of 19 July 1976 on Installations Classified for the Protection of the Environment, now codified in Book V, Title I of the Environmental Code. A national plan for the prevention of risks to health related to the environment is drawn up every five years.<sup>17</sup> The first 'National Health-Environment Plan' (PNSE 1) was developed in June 2004 by the government to guide regulation from 2004 to 2008. A second plan, PNSE 2, was adopted in July 2009. Adopted in November 2014, the PNSE 3 for the period 2015 to 2019 provides several measures, including risk mapping.

The European Union has set up the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) system and has created a European Chemicals Agency.<sup>18</sup> The REACH regulation requires companies that manufacture and import chemical substances to evaluate and assess the risks resulting from their use and to take the necessary measures to manage any identified risks. This regulation replaces more than 40 previous directives and regulations and creates a single system applicable to all chemicals.

The administrative bodies responsible for chemicals are divided between several ministries (Health and Environment). The Prevention and Precaution Committee<sup>19</sup> has a dual mission: to monitor and alert on all environmental issues likely to have an impact on human health; and to conduct expertise in the assessments of health risks related to the environment. Victims of chemicals have several legal remedies available to them when seeking redress for the damage caused. The protection of health is guaranteed under Article 11 of the preamble to the 1946 Constitution, which is incorporated into the 1958 Constitution. The regime for the prevention and reparation of damage caused to the environment by hazardous professional activities is established by Act No. 2008-757 of 1 August 2008, codified in

<sup>17</sup> C. Public health, Article L. 1311-6.

<sup>18</sup> Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning REACH, establishing a European Chemicals Agency amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, Articles 125 and 126: OJ L 396, 30 Dec; rect. No. L 36, 5 February 2009.

<sup>19</sup> Order of 30 July 1996 establishing the Prevention and Precaution Committee, NOR: ENVG965050263A.

Articles L. 160-1 to L. 165-2 of the Environmental Code. Currently, chemicals are subject to legal rules that may engage the responsibility of the various stakeholders throughout this process.

#### iv Solid and hazardous waste

Waste is defined in Article L. 541-1-1 of the Environmental Code. Hazardous waste is characterised by one or more of the hazard properties specified in Annex III of the European waste Directive 2008/98/EC. An asterisk in the list of waste mentioned in Article R. 541-7 of the Environmental Code allows reporting it. Every waste holder is required to characterise his or her waste and, in particular, to determine if it is hazardous waste in order to direct him or her to the right treatment, or, failing that, to any producer.<sup>20</sup>

After consulting the decision-making body of the municipality or the group of local authorities responsible for the collection of household waste, the mayor or the chairs of the group of local authorities responsible for collecting waste must establish the terms of the collection for various categories of waste.<sup>21</sup>

The prevention of waste is one of the pillars of the circular economy, according to Article L. 541-1 of the Environmental Code. Waste management must not endanger human health or harm the environment. The extended responsibility of waste producers is reaffirmed in the name of the polluter-pays principle, regardless of the legal nature of the producer. French legislation incorporates European guidelines in this area: the 2015 Energy Transition Act includes the European objective of reducing by 50 per cent the stored waste by 2025.

The prevention of waste is one of the pillars of the circular economy, according to Article L. 541-1 of the Environmental Code.

#### v Contaminated land

It is with the aim of limiting urban sprawl that a legislative framework dedicated to 'polluted sites and soils' was brought into the Environmental Code. Article 173 of Law No. 2014-366<sup>22</sup> on Access to Housing and Renovated Urban Planning has provided a number of clarifications that are now codified in the Environmental Code, particularly with regard to land-use changes to facilities that have been decommissioned and rehabilitated,<sup>23</sup> or construction or subdivision projects located in a land information area.<sup>24</sup> In essence, the law allows the transfer of industrial responsibilities for soil pollution to the developer and not just to the industrialist.

The legislator has confirmed the idea of *ex officio* execution of works in the case of pollution of the land or risks of soil pollution presenting threat for the health, the safety of the public and the environment regarding the use taken into account.<sup>25</sup> The person responsible is either, by order of priority: the last operator of the installation causing the soil pollution, or the person designated under Articles L. 512-21 and L. 556-1 of the Environmental Code. For soils polluted by another origin, it is the producer of waste who

<sup>20</sup> C. envir., Article L. 541-7-1.

<sup>21</sup> CGCT, Article R. 2224-26.

<sup>22</sup> Law No. 2014-366 of 24 March 2014 on Access to Housing and Renovated Urban Planning, NOR: ETLX131313501L.

<sup>23</sup> C. envir., Article L. 556-1.

<sup>24</sup> C. envir., Article L. 556-2.

<sup>25</sup> C. envir., Article L. 556-3.

has contributed to the origin of the soil pollution or the waste holder to whom the fault is attributed. As indicated, in the absence of a responsible party, one turns towards the owner of the land base of the soil polluted by an activity or waste if it is shown that he or she has been negligent or is aware of this pollution. Soil pollution is also assessed in terms of the damage it is likely to cause to the environment with a risk of serious injury to human health owing to soil contamination resulting from direct or indirect introduction of substances, mixtures, organisms or micro-organisms.<sup>26</sup>

The state is not meant to replace the designated officials. However, their failure may lead it to do so under the conditions laid down in Articles L. 131-3 and L. 541-3 of the Environmental Code.

## VII CLIMATE CHANGE

According to case law, the state's obligation contained in Article L. 229-1 of the Environmental Code is not mandatory (judgment *Commune de Heidwiller* of 21 June 2007, sentenced by the Nancy Administrative Court of Appeal).

From a purely contentious point of view, the association Notre Affaire à Tous has set itself the mission of acting for climate justice in France, particularly through the petition filed in autumn 2017 to hold the French state liable for faulty failure to act in the fight against climate change. As a result, the areas of competence assigned to local authorities could be strengthened in this matter. For example, under Article L. 121-1 of the Urban Planning Code, the law should encourage the need to preserve air quality to allow elected officials to promote in their policies the challenge of reducing greenhouse gas (GHG) emissions. The prefects, mayors or the president of the general council would risk being held responsible if they did not intervene when the populations of their locality are endangered.

Further, Article 173 of Law No. 2015-94 of 17 August 2015 on the energy transition contains obligations for companies to monitor and control measures to combat global warming; to our deepest regret, the government is struggling to make a real application of all said texts.

The fight against climate change is the subject of joint action by European countries. The integration of the environment into the policies of the European Union dates back to a meeting of the Paris European Council in October 1972.<sup>27</sup> Since 1973, the need to create a multi-annual action programme in the field of the environment has been realised. In this respect, the Seventh Programme for the years 2013 to 2020 under Article 192(3) of the Treaty on the Functioning of the European Union was established, which sets out the priority objectives to be achieved in terms of environmental protection. This programme aims, *inter alia*, to 'ensure investment in support of environmental and climate policies and combat environmental externalities' and to 'increase the Union's effectiveness in tackling international environmental and climate problems'. It was not until the 1987 Single European Act that the first legal basis for the European Union's environmental policy was established. Then, the

26 C. env., Article L. 161-1, I, 1° issued from Act No. 2008-757 of 1 August 2008 on Environmental Liability and Various Provisions for Adapting to Community Law in the Field of the Environment, NOR: DEVX0700028L.

27 See point 8 of the Declaration.



following treaties maintained the spirit of this commitment: the 1992 Maastricht Treaty and the 1997 Amsterdam Treaty. But it was through the 2007 Lisbon Treaty that climate change became a full-fledged objective of the European Union's policies.

The European Union has set itself the goal of devoting 20 per cent of its 2014 to 2020 budget to the fight against climate change (i.e., €180 billion). Member States have committed to reduce their GHG emissions by 20 per cent for the second period (2013 to 2020) compared to 1990. Since 2005, the European Union has adopted its main tool for carrying out its climate policy, the Emissions Trading Scheme, which encourages the reduction of the volume of greenhouse gases emitted by the industrial sector. Recently, to combat climate change by 2030, the European Union has set itself the target of reduction emissions by 40 per cent from 1990 levels, and has committed to increase energy efficiency by at least 27 per cent as well as promote renewable energy. In the long term, by 2050, the European Union intends to reduce its emissions by between 80 and 95 per cent compared to 1990.

To integrate the objectives of the Kyoto Protocol, France adopted the Climate Plan in 2004, which provides the possibility for local authorities to establish territorial climate-energy plans, which have become plans under Article L. 229-26 of the Environmental Code resulting from the law on energy transition for green growth. According to Article R. 229-51 of the Environmental Code,<sup>28</sup> this plan 'includes a diagnosis, a territorial strategy, an action programme and a monitoring and evaluation system'. The decree of 4 August 2016 on the Climate-Energy Territorial Plan establishes the list of atmospheric pollutants, namely nitrogen oxides (NO<sub>x</sub>), particulate matter PM10 and PM2.5, volatile organic compounds (VOCs) defined in I of Article R. 221-1 of the Environmental Code, as well as sulphur dioxide (SO<sub>2</sub>) and ammonia (NH<sub>3</sub>) and the sectors of activity to be taken into account by the authorities concerned. Finally, this decree defines the address of the IT platform on which the territorial climate-air-energy plans must be transmitted and published, as well as the data to be provided, and, depending on the categories of users, the access restrictions necessary to protect the confidentiality of personal data.

In its five-year climate plan report presented in July 2018, France has acknowledged its delay in meeting its greenhouse gas emission-reduction targets. The National Low Carbon Strategy for the period 2014 to 2018 has set at a target of 440 MtCO<sub>2</sub> (metric tons of carbon dioxide), but could reach 458 MtCO<sub>2</sub> by the end of 2018. France aims for carbon neutrality by 2050 and claims to champion the transition to a fossil fuel-free economy.

## VIII OUTLOOK AND CONCLUSIONS

For almost 40 years, French environmental law has benefited from a rather comprehensive system that remains permanently under the control of its administration and that of the administrative judge. The Environmental Code has only brought together existing texts.<sup>29</sup> As a result, it is constantly updated.

However, the statements relating to the important role that France would play in the fight against climate change do not correspond to the effectiveness or sufficient development of domestic law on the protection of biodiversity and energy transition.

Fortunately, the constant support of European law for French law, such as the consistent environmental case law of the European Court of Human Rights, is a bulwark

28 Decree No. 2016-849 of 28 June 2016 on the Territorial Climate-Air-Energy Plan.

29 See our commented edition of the LexisNexis Environmental Code, 2018.

against attempts to obstruct environmental law. To this should be added the principle of non-regression of environmental law resulting from Law No. 2016-1087 on the Recovery of Biodiversity, Nature and Landscapes, which was validated by the Constitutional Council.

# GERMANY

*Dirk Uwer and Moritz Rademacher<sup>1</sup>*

## I INTRODUCTION

Under the Basic Law for the Federal Republic of Germany (GG), the protection of the natural foundations of life and animals is a fundamental state objective. Mindful also of its responsibility towards future generations, the state shall protect the natural foundations of life and animals through legislation and, in accordance with law and justice, by executive and judicial action (Article 20a GG). Although this principle was embedded in the German Constitution no earlier than in 1994, the German state and German federal states have had a long tradition of environmental protection. This is particularly the case regarding the prevention of harmful effects of industrial installations on air, water and soil, the remediation of contamination as well as the use, storage, transport and disposal of hazardous substances.

Whereas environmental law has evolved consecutively and changed in an evolutionary manner (e.g., regarding specific areas of protection), climate change prevention has triggered rather systematic changes, especially in (environmental) energy law. Accordingly, climate protection is a key justification in the German ‘energy turnaround’, which aims to phase out nuclear energy by 2022, consecutively phase out energy production from lignite and hard coal (with the exact schedule still to be determined), reduce other fossil energy sources and promote renewable energy sources.

In general, German climate protection efforts concentrate on five greenhouse gas intensive sectors: energy, transport, agriculture, industry and trade, and buildings. Whereas the main focus of German climate protection efforts has for a long time been on the energy sector, current discussions increasingly include emission targets for the transport and agricultural sector.

## II LEGISLATIVE FRAMEWORK

No different from any other Member State environmental law within the European Union, EU directives have had great influence on German environmental law. EU regulations such as the EU Chemicals Regulation 1907/2006 (REACH) and the EU Eco-Management and Audit Regulation 1221/2009 (EMAS III) form part of the supranational environmental law directly applicable in Germany. With specific regard to German laws and regulations on environmental protection and climate change discussed in this chapter, these laws are manifold and not comprehensively codified. The reasons are primarily of a historic nature

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and based on the division of legislative powers for environmental law between the German federation on the one hand and the 16 federal states on the other hand. For the most part, the different laws focus on particular subjects of protection (i.e., air, soil and water) or sources of hazards (e.g., industrial installations). Some laws have more comprehensive legal objects, such as nature conservation or liability for environmental damage in general. Environmental laws are often further specified in more detail in related ordinances as well as administrative regulations.

Most important for industrial installations is the German Federal Emission Control Act (BImSchG), which regulates various kinds of industrial facilities. Environmental protection is already taken into account for the construction permits of these installations, in particular, in connection with the provisions of the Environmental Impact Assessment Act and the Federal Nature Conservation Act. Regarding the operation of such facilities, the BImSchG aims to protect the environment from air or water pollution, noise emissions, vibrations and comparable harmful impacts mainly by limiting or avoiding emissions. Currently, 35 ordinances specify, in particular, technical details of the basic duties under the BImSchG. Also of great practical importance, in particular, regarding emission thresholds, are two administrative ordinances: the Technical Guidelines on Noise as well as the Technical Guidelines on Air Quality. The European framework for trading of greenhouse gas emissions is transposed in the Greenhouse Gas Emission Allowance Trading Act (TEHG), which links environmental protection to climate protection by establishing a cap and trade system for the amount of permitted emissions. The German Act on Carbon Capture and Storage, however, has hardly gained any practical relevance for the reduction of greenhouse gas emissions yet.

In addition to protection and prevention efforts, liability for nevertheless present or occurring contamination of soil and groundwater is governed by the Federal Soil Protection Act (BBodSchG), the Federal Soil Protection Ordinance (BBodSchV) and by the Federal Water Act (WHG) as well as water laws of the federal states. The BBodSchG particularly applies to harmful soil changes and contaminated sites, whereas the water laws apply to significantly detrimental changes to bodies of water. In addition, environmental damage caused by business activities potentially dangerous to the environment may result in liability under the Federal Environmental Damage Act. Operators of certain installations may also be liable for damage (including third-party damage) caused by their facility under the Environmental Liability Act.

Manufacturers and importers as well as downstream users of specific substances are further subject to restrictions regarding the use, distribution and labelling as well as registration of these substances pursuant to the Chemicals Act (ChemG), the Chemicals Prohibition Ordinance (ChemVerbotsV), the Ordinance on Hazardous Substances (GefahrstoffVO) and a variety of other ordinances, including, for example, the Chemicals Climate Protection Ordinance (restricting the fluorinated greenhouse gas emissions), which largely makes reference to European law. The handling and disposal of waste is regulated by the Waste Management Act (KrWG) and various related ordinances.

In addition to the above-mentioned TEHG, climate protection targets are part of several sector-specific laws and regulations aiming to reduce greenhouse gas emissions, and promote renewable energy and energy efficiency. In the energy sector this includes, in particular, the Energy Industry Act (EnWG) setting out basic principles of energy law, the recently revised Renewable Energy Sources Act (EEG) and the Wind Offshore Act, which promote electricity generation from renewable energy sources, and the Combined Heat and Power Act (KWKG) on promotion of combined heat and power technology (CHP).

### III THE REGULATORS

As German environmental law consists of different laws on the federal level as well as on the level of the federal states, different authorities are competent to enforce environmental and climate change rules. Supreme authorities on both federal and state level are the respective ministries for environmental protection as well as energy. Of particular relevance during the current parliamentary term are the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety as well as the Federal Ministry for Economic Affairs and Energy. In their respective areas of responsibility, the ministries supervise the general administrative tasks of the higher federal environmental authorities, such as the Federal Environmental Agency, the Federal Agency for Nature Conservation and the Federal Office for Economic Affairs and Export Control. The same applies for the higher environmental authorities of the federal states. In some areas of environmental law, such as mid- and long-term disposal of nuclear waste and radiation protection, special environmental authorities, such as the Federal Office for Radiation Protection, enforce compliance with the provisions of these particular regulations.

At the federal level, the further substructure of environmental agencies differs. In some federal states, such as North Rhine-Westphalia, regional governments are, *inter alia*, competent for larger projects, such as power plants, and supervise the administration of the local environmental authorities. Other federal states, such as Lower Saxony, changed the three-tier administrative structure into a two-tier structure. In this more localised structure, trade and industry authorities are competent, for example, for permits under the BImSchG. Where environmental authorities have to enforce environmental rules against other parties (see Section IV), the administrative courts ultimately decide whether or not any administrative order, sanction or decision on fees or costs is lawful and must be complied with. However, more often than not such disputes are settled at the administrative level.

### IV ENFORCEMENT

Environmental, technical, health and safety standards have increased and multiplied in recent years under German law, in particular, based on the implementation of EU standards. This exposes operators of industrial plants, managing directors as well as employees to liability risks at different levels ranging from reputational damage and civil liability to administrative sanctions and criminal punishment.

Environmental obligations regularly address the operator of an installation and, therefore, the respective company. In the case of violations of such environmental obligations, operators of industrial plants will mainly face administrative sanctions, as well as civil claims under the law of torts brought by third parties who suffered damage to their protected rights (body, health, property). In addition to imposing administrative fines, the competent authority may also suspend or revoke permits and prohibit non-compliant activities and order remediation measures. Managing directors and other individuals involved in violations of environmental standards may face (external and internal) civil claims and criminal charges. By contrast, German criminal law does not yet recognise criminal responsibility of corporations. However, administrative fines can be imposed on corporations if a person has committed an administrative offence that also violated duties of the respective company or worked for the benefit of that company.

Whereas most infringements of environmental law are dealt with by administrative offences law, criminal sanctions in connection with violations of environmental obligations

may result from general criminal offences, such as offences against bodily integrity or damaging property as well as specific environmental criminal offences. The latter, *inter alia*, prohibit pollution of water, soil and air, unauthorised dealing with dangerous waste, unauthorised operation of an industrial plant requiring a permit under the BImSchG or endangering areas requiring protection such as water protection areas. Particularly serious cases of environmental crime, such as acting out of greed, are punished with imprisonment of not less than six months and up to 10 years. However, environmental criminal offences depend on the infringement of applicable environmental law. Consequently, acting in accordance with public environmental law or a permit or beneficial administrative act cannot constitute a criminal offence.

In addition to public enforcement, the Environmental Appeals Act enables recognised environmental associations to challenge decisions and permissions regarding certain environmentally sensitive projects. Without this privilege, only persons individually affected by the respective project would be able to take legal action under general principles of German administrative law.

Following the diesel emissions scandal, which led to the admission of car manufacturers to having used software manipulating emissions controls, the German legislator introduced a model lawsuit procedure on 12 July 2018 enabling consumers to join a lawsuit without assuming any legal risks, thereby providing for an indirect contribution to air pollution control.

## V REPORTING AND DISCLOSURE

In Germany, there is no general legal obligation to provide the authorities with contamination-related information. However, specific notification requirements especially exist in the (partially different) laws of the federal states. In general, the polluter, his or her universal legal successor, the current or former owner and the occupant have to notify the competent authority of indications of contamination of real property. Similar obligations apply in the case of release of substances hazardous to water. Facilities handling substantial quantities of harmful substances, *inter alia*, have to report to the competent authority explosions, inflammations or release of a certain amount of hazardous substances, damage to persons or real estate and certain direct damage to the environment.

Without constituting a notification requirement in the strict sense, the notification of a present or ongoing contamination to the authorities can, under certain circumstances, also be a means to avoid or mitigate responsibility under criminal law. There is, however, no particular protection for whistle-blowers under German law. Related legislative initiatives have never been adopted because the federal government considers that existing labour law regulations provide sufficient protection in such cases. Obligations for companies to implement whistle-blower hotlines while at the same time protecting confidentiality exist, for example, in the financial sector but not regarding environmental matters.

Potential disclosure obligations in relation to prospective purchasers are subject to civil law. Not disclosing known or suspected environmental liabilities may amount to fraudulent misrepresentation and thereby give cause for annulment of a contract. Unknown environmental liabilities may trigger warranty rights subject to contractual arrangements.

Regarding financial reporting obligations, environmental incidents may gain such financial importance for the performance of a company that they have to be mentioned in corporate reports in accordance with general reporting standards. Major corporations

additionally have to report on environmental matters in their situation report, including environmental protection strategies and programmes, preventive measures, compliance with environmental standards, use of energy and water, as well as emissions and waste management.

## VI ENVIRONMENTAL PROTECTION

### i Air quality

The protection of air quality is foremost subject to maturely developed emissions law. Under the BImSchG, the construction and operation of facilities that are particularly likely to cause harmful effects to the environment or otherwise endanger or cause significant disadvantages or significant nuisances to the general public or the neighbourhood, require a specific emission permit. The main criteria determining the permit requirements are the materials used or produced and the functions of the facilities as well as the production volumes. The respective facilities are listed in the Fourth Ordinance Implementing the Federal Emissions Control Act.

The Technical Guidelines on Air Emissions (TA Luft) specify emission values for all relevant airborne pollutants. The TA Luft are currently undergoing revision to adapt standards to the current technical state-of-the-art. It is expected that emission values will decrease owing to European regulations (BAT conclusions), but also as a consequence of the federal government's air pollution control goals under the new 43rd BImSchV of 31 July 2018. The reductions shall apply as of 2020 compared to the year 2005. The federal government is expected to present a first clean air programme on 31 March 2019. Some federal states have also developed guidelines for odour emissions to establish presence of odour nuisances. Standards for odour emissions shall also be incorporated in the revised TA Luft. The competent authority shall periodically monitor air quality (Sections 44 ff., 40 BImSchG), for example, regarding air pollution caused by traffic. In this case, the competent authority may restrict or prohibit the use of motor vehicles.

In the wake of the diesel emissions scandal, discussions on general traffic bans for older diesel cars in German city centres gained momentum. On 1 June 2018, the city of Hamburg decreed the first driving ban for older diesel vehicles on selected streets particularly impacted by high values of nitrogen oxides. Other cities, such as Berlin, Frankfurt and Stuttgart, are currently preparing or have already decided on gradual driving bans as well. The federal government recently decided on a set of measures, including software and hardware updates, as well as replacement strategies to avert further traffic bans, and is also going to determine by way of an amendment of the BImSchG that traffic bans are regularly disproportionate where the concentration of nitrogen dioxide does not exceed an annual average value of 50 mg per m<sup>3</sup> (the statutory threshold is 40 mg per m<sup>3</sup>).

The permit under the BImSchG does not only cover emissions originating from the respective plant but also other public law requirements, in particular under building law (the concentration effect). The permit typically contains collateral clauses and regulations specifying the content of the permit. A modification or alteration of an existing plant must either be notified to the authority or – in case of material alterations – will require a new permit.

If an emitting plant is constructed, altered or operated without the required permit, the competent authority may order the operator to shut down or even demolish the plant. In addition, the operator's misconduct may constitute a criminal offence. If an operator holds a permit but does not comply with the applicable requirements, the competent authority may

order remedial measures by way of a subsequent order or may prohibit the operation of the plant. If an operator or owner finally ceases the operation of a plant, he or she is obliged to take necessary measures to return the site to a satisfactory state, for example, by demolishing the installations.

## **ii Water quality**

Water quality in Germany is, *inter alia*, protected by the provisions of the WHG. Under this Act, certain practices with possibly detrimental effects on the natural water resources require permission and are subject to certain provisions. In particular, installations for handling substances hazardous to water must be built and operated in such a manner that no contamination of water or any other detrimental change of its properties is to be feared. Currently, specific technical requirements for such installations, including reporting and safety requirements, are regulated by the Ordinances on Installations for the Handling of Substances Hazardous to Water of the federal states, whereas the obligations of operators are regulated in the Ordinance on Installations for the Handling of Substances Hazardous to Water.

Installations handling substances hazardous to water must be tested and classified with respect to their properties. Substances are classified on the basis of the Administrative Regulation on the Classification of Substances Hazardous to Waters. According to this regulation, there are three water hazard classes (WGK):

- a* WGK 1: a low hazard;
- b* WGK 2: a hazard; and
- c* WGK 3: a severe hazard.

## **iii Chemicals**

Under German law, a company that handles, stores or uses chemicals and other hazardous substances, in particular, explosive, oxidising, flammable or toxic substances, must comply with certain safety regulations and provide safety measures as stipulated in the above-mentioned ChemG, ChemVerbotsV, GefahrstoffVO, the Technical Rules for Hazardous Substances, the Industrial Safety Ordinance and the Technical Rules for Safety in Work Places.

A company storing hazardous substances must prepare a comprehensive risk assessment determining the necessary occupational safety measures for the working place described. For example, hazardous substances have to be stored in containers that cannot be mistaken for containers containing food regarding the packaging (label, shape). The employer also must appoint a duly qualified responsible person observing compliance with labour safety and protection regulations.

Facilities handling substantial quantities of harmful substances are also subject to the additional requirements of the Ordinance on Hazardous Incidents, including precautions to prevent hazardous incidents and enhanced safety measures as well as notification and reporting obligations. To this end, the Ordinance provides a general concept to prevent major accidents in such areas. The operator must develop an individualised concept, including a safety management system, to prevent major accidents before starting to operate the respective facility. In addition, the operator might be subject to increased duties, for example, to submit a safety report and an alarm and hazard control plan and to fulfil certain information requirements.

The transport of dangerous goods is also subject to special regulations under German law, including the Dangerous Goods Transportation Act and several ordinances. The transport



of dangerous goods is generally only permitted if all required safety regulations are fulfilled. A safety adviser must be appointed if a company takes part in the transport of dangerous goods by railroad, aircraft, sea or land vehicles.

#### **iv Solid and hazardous waste**

German waste law as provided by the KrWG and various ordinances regulates the handling and disposal of waste. According to the KrWG, waste first must be avoided and second must be recycled or recovered or be used to produce energy. Waste that is not recycled must be disposed of in accordance with basic principles of waste management guided by public interest (waste hierarchy). To ensure such disposal, records of proper waste management have to be prepared.

Special regulations apply to the disposal of certain waste substances not covered in the KrWG (e.g., nuclear fuel and radioactive substances or wastewater, which are subject to the national and federal water laws).

Following the nuclear phase-out in Germany by the end of 2022, the final storage of radioactive substances and nuclear fuel is a major challenge. In this regard, the Site Selection Act contains procedural steps for a science-based and transparent search and selection of a suitable site for the safe storage of highly radioactive waste. The selection process shall be completed by the year 2031 and the repository shall be operative by the middle of the century.

#### **v Contaminated land**

The liability for environmental contamination is mainly governed by the BBodSchG, the BBodSchV and by the federal and state water laws. The BBodSchG particularly applies to harmful soil changes and contaminated sites, such as former waste disposal and industrial sites. Harmful soil changes within the meaning of the BBodSchG are harmful impacts on soil functions that are able to bring about hazards, considerable disadvantages or considerable nuisances for individuals or the general public. This damage may be caused by contamination, but also by a compression or dehydration of the soil. The BBodSchG applies to all currently existing known and (still) unknown and all future harmful soil changes.

The BBodSchG stipulates a general remediation liability irrespective of involvement, fault or knowledge of such contamination. This responsibility applies to:

- a* the polluter;
- b* his or her universal legal successor;
- c* the current and, in the case of a sale after 1 March 1999, the former owner;
- d* the current occupant of the real property (e.g., the lessee); and
- e* persons or entities that, under commercial or corporate law, must answer for an entity that owns contaminated real property, or persons or entities that gave up ownership of such properties.

The competent authority may decide which person or entity shall be held liable for remediation measures, subject to the authority's discretion, guided by the consideration of which party will be able to carry out remediation most efficiently. This applies regardless of private law agreements about the responsibility for contamination, as can be found, for example, in lease contracts. To balance potential conflicts resulting from these statutory and administrative principles, the BBodSchG provides for compensation among the several responsible parties if the authority only requested a limited number of parties or only a certain party to carry out the remediation. The obligation to pay compensation and the amount of compensation

depend on the extent to which the harmful soil changes or contamination was actually caused primarily by one party or another. By consequence, this provision *de facto* establishes a restricted ‘polluter pays’ approach.

As soon as contaminated soil is excavated in the course of construction or remediation works, it no longer falls within the scope of the BBodSchG. Instead, it may qualify as waste pursuant to the KrWG, which may result in additional disposal costs. An administrative provision by the Federal States’ Working Group on Waste stipulates six categories on a contaminant-threshold basis for a proper and safe recycling or disposal of landfill. While landfills in categories Z 0, Z 1 and Z 2 may be recycled – subject to restrictions in Z 1 and Z 2 – by means of use for construction works, waste in categories Z 3 to Z 5 may only be disposed of on waste disposal sites. Although these rules are only (legally non-binding) guidelines, they are often used by the respective authorities as the relevant standards.

The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety has, for quite some time, been preparing an Ordinance on Secondary Construction Materials, which shall establish binding and unified rules for the use of mineral secondary construction materials in Germany. This process was recently picked up again and shall also include a revision of the BBodSchV, which sets out the requirements for soil protection in more detail. The revision will, in particular, address the filling of excavations and open cast mines, pedological site support, harmful soil changes because of erosion by wind and the methodologies for determining the levels of contaminant content. However, only minor and rather consolidating changes are expected regarding the assessment and evaluation of environmental contamination, as well as their cleanup and decontamination.

## VII CLIMATE CHANGE

Based on the global trend of decarbonisation, international and European law have had great influence on German climate protection regulations. In 2010, the German federal government decided to reduce greenhouse gas emissions by 80 to 95 per cent compared to 1990 by 2050. On a policy level, on 14 November 2016 the German federal government adopted the Climate Action Plan 2050 following a broad and controversial political and social debate. The plan outlines how Germany intends to achieve extensive greenhouse gas neutrality by the middle of the century. However, an independent discipline of climate protection law is still being developed in Germany. Accordingly, climate protection is not comprehensively regulated, at least not yet. Several environmental laws have rather identified climate protection as an objective of the relevant legislation and either aim to reduce greenhouse gas emissions, improve energy efficiency or promote renewable energies to facilitate and protect that objective.

### i Climate Action Plan 2050

The Climate Action Plan 2050 defines a number of key areas for specific action (i.e., energy, building, transport, trade and industry, and agriculture and forestry) with both guiding principles until 2050 and milestones and targets for 2030.

For the first time, the Climate Action Plan 2050 sets sectoral targets for emissions reduction that will be monitored and adapted in the future.

The Climate Action Plan 2050 has so far not specified how these aims will be achieved. To this end, the federal government on 6 June 2018 established a commission for growth, structural change and employment (the Coal Commission) to integrate the expertise of the

governments of the federal states as well as the municipalities, trade unions, company and industry experts. This commission will develop annual action programmes to specify the milestones and targets of the Climate Action Plan 2050.

In general, the Climate Action Plan 2050 aims to further develop energy standards in both new buildings and existing stock undergoing renovation, as well as the promotion of heating systems based on renewable energy sources. Road transport will have to take electric mobility into account in particular. The German government and businesses must work together regarding research and development programmes to reduce greenhouse gas emissions. Expanding forest areas and improving regulations for fertilisation are further measures. Regarding the energy industry, it remains a goal of the federal government to completely decarbonise electricity production by 2050. Meanwhile, the Coal Commission has suggested starting the decommissioning of the first coal fired power plants between 2019 and 2022.

## **ii Greenhouse gas emission allowance trading system**

The reduction of greenhouse emissions is primarily achieved by means of the TEHG. Under these regulations, an installation emitting greenhouse gases from activities listed in Annex 1 TEHG requires a greenhouse gas emissions permit. This particularly concerns conventional power generation and other industrial activities, such as the production of cement clinker and lime or dolomite in rotary kilns or other furnaces with a certain production amount, but also air traffic. If a permit in terms of the BImSchG has been issued prior to 1 January 2013, this permit also constitutes the required emission permit. Otherwise, a separate emissions permit is required.

Operators of emitting installations have to cover their actual greenhouse gas emissions by emissions certificates. These allowances are issued as tradable rights so that the beneficiary may either sell surplus allowances or obtain additional allowances if required. For the third emissions trading period from 2013 to 2020, the allocation of emissions allowances is subject to the Allocation Ordinance 2020. Compared to the previous two trading periods, this ordinance has reduced the general national cap for emission allowances as well as the number of emission allowances allocated to the operators free of charge; the number of auctioned allowances has generally increased. In the energy sector, all allowances have been auctioned since 2013.

On 4 October 2018, the federal government adopted a bill to align the TEHG with the revised requirements of the EU Emissions Trading Directive for the fourth emissions trading period from 2021 to 2030. The overall number of emission allowances will further decline at an annual rate of 2.2 per cent from 2021 onwards, compared to 1.74 per cent currently.

Emission allowances have to correspond to an annual emission report, which must be submitted by the operators to the competent authority by 31 March of each year. If an operator exceeds the annual volume of emissions contained in the allowances and fails to buy the required additional volume, a fine of €100 per tonne of greenhouse gas emitted will be imposed on him or her and his or her name will be published accordingly.

Part of the efforts to reduce greenhouse gas emissions in the energy sector is also the recently effected transfer of specific lignite power plants into a remunerated reserve position for four years, followed by the final shutdown of operations under the revised EnWG.

## **iii Promotion of renewable energy sources**

Greenhouse gas emissions, in particular in the energy sector, are indirectly being reduced by the promotion of electricity production from renewable energy sources. In recent years, the

renewables share within the overall production of electricity in Germany has increased to approximately 33.3 per cent in 2017 and is envisaged to further increase to 40 to 45 per cent in 2025, 55 to 60 per cent in 2035 and at least 80 per cent in 2050.

In Germany, different statutory support mechanisms have been in place since 1991. Since 2000, the applicable regulations have been set out in the EEG. The type and amount of support generally depend on the time the installation first commenced operation and the type of renewable energy. Although the promotion system has been changed constantly, the applicable legal framework for a renewable energy installation is being grandfathered for a period of 20 calendar years plus the year in which the installation was commissioned. By consequence, different promotion systems apply to different installations. However, there are four main types of promotion schemes: fixed feed-in tariffs, voluntary direct marketing with market premium, mandatory direct marketing with market premium and tender procedures with a 'pay-as-bid' remuneration.

Until 2012, fixed feed-in tariffs were the only applicable statutory support scheme. These tariffs are paid to the operators of the installation by the connecting grid operators and ultimately charged to the end customers in form of the EEG levy. Beginning with the EEG 2012, operators of RES installations can also opt to sell their electricity directly to third parties. Any shortfall of the technology specific market values compared to the statutory feed-in tariffs is compensated through a market premium. While direct marketing was optional under the EEG 2012 and remains optional for existing installations, it became mandatory for most new installations under the EEG 2014 in order to facilitate further integration of renewable energies into the electricity market. Finally, under the EEG 2017, funding for certain installations is no longer based on fixed statutory tariffs since 1 January 2017, but rather subject to an auctioning system resulting in a 'pay-as-bid' remuneration. The federal government recently decided to publish additional invitations for tenders amounting to 4 gigawatts of solar energy systems and 4 gigawatts for onshore wind installations up to the end of 2021.

The promotion of offshore wind installations is regulated separately in the Wind Offshore Act, which prescribes two auction procedures in 2017/2018 for an interim period for installations commencing operation between 2021 and 2025. Each auction covers capacities of 1550MW. As of 2021, annual auctions will be held for projects commencing operations from 2026 onwards. In this Danish model, the competent authority will determine and pre-evaluate specific areas for offshore wind farms, and bidders will compete in the auction for the right to construct an offshore wind farm in the designated areas.

In addition to the EEG, the Act on the Promotion of Renewable Energies in the Heat Sector promotes the use of renewable energy sources for the production of heat also with the aim of reducing the use of fossil fuels. The promotion is mainly in the form of obligations to use renewable energy sources in new houses and – depending on the laws of the federal states – also in existing buildings. Such use is also partly state funded.

In the transport fuel sector, the use of renewable energy in the form of biofuels is promoted by tax allowances and a mandatory marketing quota of biofuels for oil companies under the BImSchG.

#### **iv Energy efficiency regulations**

Energy efficiency is another way of indirectly reducing greenhouse gas emissions. An important part of energy efficiency is the utilisation of heat generated in the regular process of electricity production via the promotion of CHP installations. Whereas CHP based on

renewable energies is promoted under the EEG, CHP based on fossil fuels is promoted by the KWKG. Operators of CHP plants receive a bonus on their electricity production per kWh, which is ultimately charged to the end customers in form of the KWKG levy.

Under a recently published new bill, the promotion for CHP is going to decrease in the future. Existing CHP plants with an electrical power of more than 300MW will not receive any more funding from the year 2018 onwards. Existing installations with electrical power exceeding 50 MW will receive lower funding compared to the 1.5 ct/kWh currently applicable under the KWKG.

The Act on Economisation of Energy and the Ordinance on Economisation of Energy prescribe energy-saving construction of buildings and energy-saving operations. The Act on Energy Efficiency Labelling and the Ordinance on Energy Efficiency Labelling require information on the energy consumption of the specific product. The Energy-related Products Act prescribes an eco-friendly design for energy-using products as well as products influencing the energy use of other products. The federal government is currently preparing a bill on 'building energy'. The bill requires all publicly owned and used (non-resident) buildings to be constructed as nearly zero-energy buildings from 1 January 2019. This requirement will apply to all newly constructed buildings as of 1 January 2021.

#### **v Climate protection on the level of the federal states**

Based on the international, European and national regulations regarding climate protection, several of the German federal states have adopted climate protection plans and some have also adopted climate protection acts, such as the Climate Protection Act North Rhine-Westphalia. Under this Act, greenhouse gas emissions in North Rhine-Westphalia shall be reduced by at least 80 per cent until 2050 compared to the year 1990. The related climate protection plan of North Rhine-Westphalia includes 220 specific measures to implement this goal.

### **VIII OUTLOOK AND CONCLUSIONS**

Germany has always considered itself a frontrunner for climate protection. However, the latest climate protection report shows that – if nothing were to change – Germany will miss its aim to reduce the annual greenhouse gas emissions. Instead of a reduction of 40 per cent by 2020 compared to 1990, Germany would only be able to reduce greenhouse gas emissions by 32 per cent. This is due to significantly higher economic and population growth rates in addition to lower prices for oil, coal and gas than expected. Whereas emission reductions in the industry and energy sector are expected to just fall a little short of the 40 per cent mark, hardly any reductions are expected in the transport sector.

The federal government has declared its intent to reach its climate target as soon as possible and confirmed its aim to reduce greenhouse gas emissions by 55 per cent by the year 2030. Further, the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety is currently preparing a climate protection act, which is supposed to enter into force in 2019 and assign specific reduction targets, in particular for the economy, transportation and the agricultural sector.

# INDIA

*Sanjeev Kapoor and Nawneet Vibhaw<sup>1</sup>*

## I INTRODUCTION

India has moved up 23 places in the World Bank's 'ease of doing business' rankings,<sup>2</sup> down from rank 100 in 2017 to rank 77. This reflects the various measures initiated by the government of India to attract investment in the country. However, balancing growth imperatives with environmental responsibilities continues to remain the key challenge for the world's sixth-largest economy and second-most-populous nation. In the past few years, the government has introduced a slew of environmental regulations in consultation with diverse stakeholders, ensured mandatory implementation of 24/7 real-time emission and effluent monitoring in industries, upgraded emission standards for polluting industrial sectors, and taken stringent action, including closure against polluting industries.

More recently, the statutory authorities have also initiated criminal prosecution in environmental matters. The judiciary, be it the National Green Tribunal (NGT) or the Supreme Court of India, continues to play an even more proactive role. Tackling air and water pollution, waste, and water conservation and management remain the key challenges. India continues to move towards cleaner options for mobility, renewable forms of energy and environmentally sustainable methods of manufacturing. Forest, wildlife and overall biodiversity conservation are key to sustaining the growth model of a country keen to emerge as one of the most reliable investment destinations out of the success of its initiatives such as 'Make in India' and 'Invest India'. The process of seeking environmental clearances and consents continues to remain streamlined.

The fact that Prime Minister Narendra Modi was awarded the UN's 'Champions of the Earth' Award this year along with the French President Emmanuel Macron for championing the International Solar Alliance as well as for pledging to eliminate all single-use plastic in India by 2022 highlights India's focus on environmental issues.

## II LEGISLATIVE FRAMEWORK

India adopted the objectives of the Stockholm Declaration of 1972 through the 42nd Amendment of the Constitution of India in 1976.<sup>3</sup> The Amendment led to the insertion of certain provisions and set the tone for the statutory framework for environment protection in India. The Constitution of India is among the few constitutions in the world that contain

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2 World Bank, 'Doing Business 2019: Training for Reform', October 2018.

3 Nawneet Vibhaw, *Environmental Law - An Introduction*, 1st Edition, 2016, LexisNexis.

specific provisions on environmental protection.<sup>4</sup> The Constitution embodies environmental protection and promotion as a fundamental right guaranteed to Indian citizens.<sup>5</sup> That apart, Article 48-A, which forms part of the Directive Principles of State Policy of India, although not enforceable as an obligation of the state, acts as the guiding principle for policy formulation and mandates that the state should endeavour to protect and improve the environment and safeguard the forests and wildlife of the country. Additionally, Article 51-A(g) of the Constitution of India imposes a fundamental duty on every citizen of India to protect and improve the natural environment.

Apart from the general constitutional mandate on both the state and the citizens, a suite of statutes also exists that protects and regulates various environmental aspects. The Environment (Protection) Act 1986 (EPA) is the umbrella legislation that deals with environment protection in India.

Some of the other key specialised legislation include:

- a* the Water (Prevention and Control of Pollution) Act 1974 (the Water Act) to provide for the prevention and control of water pollution and maintaining or restoring the wholesomeness of water;
- b* the Forest (Conservation) Act 1980 to provide for the conservation of forests;
- c* the Air (Prevention and Control of Pollution) Act 1981 (the Air Act) to provide for the prevention, control and abatement of air pollution;
- d* the Biological Diversity Act 2002 to provide for the conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto; and
- e* the National Green Tribunal Act 2010 (the NGT Act) to provide for the establishment of the National Green Tribunal for the effective and expeditious disposal of cases relating to environmental protection and the conservation of forests and other natural resources, including enforcement of any legal right related to the environment, and giving relief and compensation for damage to persons, property and for connected or incidental matters.

These statutes, along with various rules, regulations and notifications, implement the statutory mandate to protect various other facets of the environment in India.

Two key notifications worth noting are the Coastal Zone Regulation Notification 2011 (the CRZ Notification) and the Environmental Impact Assessment Notification 2006 (the EIA Notification).<sup>6</sup> These notifications regulate the grant of environment clearance to various projects in India. The CRZ Notification notifies the coastal stretches of the country and the water area up to its territorial water limit as a coastal regulation zone and primarily applies to developmental activities undertaken in such zones that impact the coastal environment. The EIA Notification, on the other hand, covers any new constructions or expansion of existing projects listed in the Schedule to the Notification. The Notification prescribes processes such as screening, scoping, public consultation and appraisal of the upcoming project prior to grant of the environment clearance for the project. The main purpose of the exercise is to

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4 Shyam Diwan and Armin Rosencranz, *Environment Law And Policy In India*, 2nd Edition.

5 The right to a clean environment has been recognised as an integral part of right to life guaranteed under Article 21 of the Constitution of India.

6 These notifications have been issued by the central government under Section 3 of the EPA.

assess the impact of a proposed project on the environment and the people in an attempt to abate the same. The onus to prove that a project is environmentally benign is on the project proponent.

### **III THE REGULATORS**

Government agencies regulating and enforcing environmental and climate change rules in India include the following.

#### **i The Ministry of Environment, Forests and Climate Change**

The Ministry of Environment, Forests and Climate Change (MoEF&CC) is the Ministry responsible for implementation of policies and programmes relating to conservation of the country's natural resources, including its lakes and rivers, its biodiversity, forests and wildlife, ensuring the welfare of animals, and the prevention and abatement of pollution. The MoEF&CC plays a crucial role in granting environmental clearances to certain major projects that are required to seek such clearances from it under the EIA Notification. Certain other projects with lesser perceived environmental impacts are required to seek such clearances from state authorities. The MoEF&CC is also responsible for notifying the environmental standards for various industries, including the emission and effluent standards.

#### **ii Central Pollution Control Board**

The Central Pollution Control Board (CPCB) is a statutory body responsible for: advising the central government on any matter concerning prevention and control of water and air pollution; executing a nationwide programme for the prevention, control or abatement of water and air pollution; and coordinating the activities of the state boards and resolving disputes between them. CPCB is the statutory authority at the national level responsible for assessing and recommending to the MoEF&CC for fixing the environmental standards. It is also responsible for issuing technical guidelines for various industries.

#### **iii State pollution control boards and pollution control committees**

Each state has a state pollution control board (SPCB) and each Union Territory has a pollution control committee (PCC) entrusted with the implementation of the provisions of the Water Act and the Air Act and for the overall enforcement of the provisions of the EPA and the Rules framed thereunder. SPCBs and PCCs have been given powers that include issuing closure notices to polluting industries, imposition of fines, implementation of remediation measures for restoration of the environment, etc. An SPCB is responsible for the regular monitoring of all industries that require environmental consents to establish and operate. It ensures that all industries operate as per the prescribed environmental standards. An SPCB also has the power to initiate criminal action against polluting industries.

#### **iv Environmental Pollution (Prevention & Control) Authority**

The Environmental Pollution (Prevention & Control) Authority (EPCA) is a technical committee constituted by the central government in compliance with the order of the Hon'ble Supreme Court of India. EPCA has been constituted with the objective of protecting and improving the quality of the environment, and preventing and controlling environmental pollution in the National Capital Region. EPCA has been playing a crucial role by assisting



the Hon'ble Supreme Court of India in various environment-related matters. EPCA was first constituted in 1998 but its tenure has been extended ever since. More recently, the recommendations by EPCA have had a national bearing as its recommendations for the National Capital Region have been found relevant and therefore extended and implemented in various parts of the country by the Hon'ble Supreme Court of India.

#### **v Other authorities**

Additionally, under Section 3(3) of the EPA, the central government is empowered to appoint various authorities to carry out the functions of the central government under the Act. One such authority is the Central Ground Water Authority, which regulates and controls groundwater development and management in the country. Another such authority is the Central Wetland Regulatory Authority, which is responsible for the conservation and management of wetlands in the country.

#### **vi Judicial role in environment regulation**

India is one of the very few countries in the world that has a specialised quasi-judicial authority to deal with cases involving a 'substantial question relating to environment'. The NGT, which was constituted in 2010 and comprises both judicial and technical members, plays a very proactive role in the protection of environment. Environmental matters are also heard by the state high courts and the Supreme Court of India in the form of public interest litigation or under their writ jurisdiction. Appeals from the NGT are heard by the Supreme Court of India. With environmental issues and concerns gaining centre stage in India, the judiciary has been playing a very proactive role. While the NGT is the specialised tribunal for dealing with environmental disputes, various state high courts and, most importantly, the Supreme Court, have been dealing with environmental matters much more frequently owing to the writ petitions and public interest litigations being filed before them. With criminal prosecution being initiated more frequently in environmental matters by SPCBs, the courts of criminal jurisdiction are also dealing with environmental cases more frequently.

### **IV ENFORCEMENT**

#### **i Public interest litigation (PIL)**

Since the 1980s, PIL has been widely used as an effective tool in India to redress public grievances pertaining to unfair and unjust public policies, arbitrary actions of the government, human rights violations by the state and violation of fundamental rights guaranteed under the Constitution of India. A PIL can be filed in the Supreme Court or the state high courts under Articles 32 and 226 of the Constitution of India, respectively, by any person in India seeking to petition a cause, which may affect a section of the society, regardless of whether the petitioner has a substantial stake in the grievance. PIL has been used as a very effective tool by public-spirited persons and activists in the environmental context. Some of the key principles

that have been adopted for the adjudication of environmental disputes are the polluter-pays principle,<sup>7</sup> sustainable development,<sup>8</sup> precautionary principle, public trust doctrine,<sup>9</sup> strict liability and absolute liability.<sup>10</sup>

## ii Statutory or legal remedy

In 2010, India enacted the much overdue NGT Act to provide for effective and expeditious disposal of cases relating to the environment. Ever since, the NGT has been playing a proactive role in ensuring enforcement of the environmental laws, mainly through the imposition of heavy penalties on erring industries and injuncting industries from proceeding with development projects that do not have the requisite environmental consents and clearances.

The NGT Act is broadly worded and provides that 'any person' may approach the Tribunal if it is aggrieved by an environment clearance issued to an industry for any development project, directions issued by the SPCBs under the Water Act or the Air Act, any policy decision on benefit sharing by the state biodiversity board, etc.<sup>11</sup> Further, any person who is a victim of environment damage, whose property has been damaged, or the CPCB, an SPCB or any local authority constituted under the EPA may approach the Tribunal for grant, relief, compensation or settlement of a dispute relating to the environment.<sup>12</sup> Because of the broadly worded nature of the NGT Act, many environmental activists and non-government organisations who may not be directly or substantially affected by the alleged grievance but who are generally interested in the restitution of the environment, have also been given the right to approach the NGT.

However, the NGT in one of its orders<sup>13</sup> directed that every applicant and appellant must approach the concerned authority against which they intend to file an appeal or application and give such authority a time period of 15 days to respond. Thereafter, when the applicant or appellant approaches the NGT, it is obligatory that the response received from the concerned authority is also mentioned in the application or appeal filed before the

7 The Supreme Court of India in the case of *Indian Council for Enviro-Legal Action v. Union of India* AIR 1996 SC 1446 has held that, 'The polluter pays principle means that absolute liability of harm to the environment extends not only to compensate the victims of pollution, but also to the cost of restoring environmental degradation. Remediation of the damaged environment is a part of the process of sustainable development.'

8 In *Vellore Citizens Welfare Forum v. Union of India*, AIR 1996 SC 2715 the Supreme Court held that, 'The traditional concept that development and ecology are opposed to each other, is no longer acceptable. Sustainable development is the answer.'

9 *MC Mehta v. Kamal Nath* (1997) 1 SCC 388: The SC used this doctrine for the first time in this case in the context of protection and preservation of natural resources and held that the state is under a duty to protect natural resources and they cannot be converted into private ownership.

10 *MC Mehta v. Union of India*, AIR 1987 SC 1086: the Supreme Court departed from the English law of strict liability and evolved the principle of absolute liability. It held that an enterprise engaged in an inherently dangerous activity owes an absolute duty to the community to ensure that no harm is caused by the activities undertaken by it. Since the pronouncement of this judgment, the defence of reasonable care and absence of negligence are no longer valid defences for enterprises engaging in inherently dangerous activities to avoid liability.

11 Section 16 of the NGT Act.

12 Section 18 of the NGT Act.

13 Order dated 19 July 2018 by NGT, New Delhi in the case of *Shivpal Bhagat v Union of India*.

NGT. This has been done to discourage frivolous litigation in environmental matters besides giving the concerned authorities an opportunity to address the grievance if possible, before it is brought before the NGT for its consideration.

The NGT is bestowed with the power to provide relief and compensation to victims of pollution, pass directions for restitution of damaged property and the environment and impose fines commensurate to the extent of the damage caused and even order imprisonment. The NGT can even punish the head of the government department for non-compliance with the orders of the Tribunal.<sup>14</sup> The Tribunal is guided by the principles of sustainable development, the precautionary principle and the polluter-pays principle in its decision-making.<sup>15</sup>

### iii Remedies in criminal law

The Indian Penal Code 1860 and the Code of Criminal Procedure 1973 provide for remedies against public nuisance. Public nuisance is essentially an unreasonable interference with the general right of the public. On receipt of a complaint, the magistrate has the power to order the removal of the nuisance complained of within a time-bound period. For instance, in the case of a complaint regarding a company discharging contaminated water, the magistrate may direct the company to immediately stop such discharge, failing which the officials in charge of the company would be liable for imprisonment. Environmental legislation in India, such as the EPA, the Water Act and the Air Act, also have provisions that provide for imposition of a fine and imprisonment. In cases of environmental damage having been caused by projects, instances of criminal proceedings being initiated against the officials responsible for the operations have become more frequent.

## V REPORTING AND DISCLOSURE

### i General reporting obligations

The Rules framed under the EPA mandate industries to submit a yearly environmental statement disclosing, *inter alia*, the quantity of water and air pollutants discharged by the industry; the concentration of pollutants in discharges; and the percentage of variants from prescribed standards with reasons.<sup>16</sup> The consent to operate or the environment clearance granted for the development activity to be undertaken by an industry also imposes reporting obligations on the person in charge. The reporting obligations in most cases have become quarterly and biannual as per the conditions prescribed in the environmental consent granted and renewed by the SPCBs in various states. With the online monitoring systems being installed in most states and connected to the servers of the SPCB and, in some cases, the CPCB, it has become easier for the authorities to monitor and control pollution. It has accordingly become more convenient for the industries to report compliance with prescribed emission and effluent standards.

### ii Disclosure of excessive discharge or emissions

The EPA and the Rules framed thereunder also impose an obligation on the person in charge of the place to furnish information to the concerned authorities and agencies regarding

<sup>14</sup> Sections 26 to 28 of the NGT Act.

<sup>15</sup> Section 20 of the NGT Act.

<sup>16</sup> Rule 14 of the Environment (Protection) Rules 1986.

occurrence or apprehension of occurrence of discharge of environmental pollutant in excess of the prescribed standards owing to any accident or unforeseen act or event.<sup>17</sup> There is a similar obligation under Section 31 of the Water Act of furnishing information to the SPCB if there is discharge or likelihood of discharge of polluting matter in any stream pursuant to an accident, or other unforeseen act or event. Non-compliance with the reporting and disclosure obligations attracts punishment in the form of a fine and imprisonment under the EPA.

## VI ENVIRONMENTAL PROTECTION

### i Air quality

The Air Act, in tandem with the EPA, provides for the prevention, control and regulation of air quality in India. Under the Air Act, the CPCB and the SPCB are the designated authorities for this purpose. The state government in consultation with the SPCB has the power to declare any area as 'air pollution control area'.<sup>18</sup> A consent to establish, followed by a consent<sup>19</sup> to operate, must be taken from the SPCB before establishing any industrial plant. Further, compliance is ensured through regular monitoring and imposition of fines and imprisonment for non-compliance. The industry or operation-specific standards for emission or discharge of environment pollutants are periodically revised by the MoEF&CC through the CPCB.

With increasing concerns about poor air quality in India, especially the capital region of Delhi, steps such as banning the burning of waste and crop residue, banning the registration of petrol and diesel vehicles older than 15 and 10 years, respectively, and banning the import and usage of petroleum coke as a fuel have been taken. The Hon'ble Supreme Court has ordered<sup>20</sup> that, from 1 April 2020, only vehicles compliant with BS-VI standards would be sold in India.

### ii Water quality

The Water Act, along with the EPA, primarily deals with regulation of water resources in India. The Water Act is comprehensive and applies to streams, inland waters, subterranean waters, and sea or tidal water. There is a consent procedure whereby no industry that is likely to discharge sewage or trade effluent can commence operations without the previous consent of the SPCB.<sup>21</sup> The Water Act generally prohibits disposal of polluting matter in excess of the standards established by the EPA or SPCB. Industry or operation-specific standards for the discharge of effluent or the quality of water are periodically prescribed by the MoEF&CC through the CPCB, and enforced by the SPCBs through the consents granted to the industries.<sup>22</sup>

The Prime Minister of India in his address on World Environment Day 2018 acknowledged tackling water pollution as one of the biggest challenges for India and expressed hope that initiatives such as the Namami Gange Programme would help clean rivers like the Ganges. As a result, effluent treatment plants have been established all along the river and SPCB has become more stringent in monitoring effluent discharge by industries.

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17 Section 9 of the EPA read with Rule 12 of the Environment (Protection) Rules 1986.

18 Section 19 of the Air Act.

19 Section 21 of the Air Act.

20 Supreme Court Order, dated 24 October 2018 in *MC Mehta v Union of India*.

21 Section 25 of the Water Act.

22 Section 24 of the Water Act.

### iii Chemicals

The Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 regulate handling and dealings in hazardous chemicals. The rules apply to industrial activities in which a hazardous chemical as specified in the schedule to the rules is involved. Any industrial activity in which there might be a threshold quantity of a hazardous chemical is not to be undertaken without approval from the relevant authority.<sup>23</sup> The rules further cast an obligation on the entity who has control of such industrial activity to provide evidence to show that it has identified the major accident hazards and taken adequate steps to prevent major accidents or limit their consequences to persons (including persons working on the site) and the environment. The rules require the occupier to notify any major accident within 48 hours to the concerned authority and thereafter furnish a report relating to the accident in instalments in the format prescribed in the schedule to the rules. The authority concerned is in turn required to undertake full analysis of a major accident and send the requisite information to the MoEF&CC.<sup>24</sup>

### iv Solid and hazardous waste

The waste management rules of the country were completely revamped in 2016.<sup>25</sup> As part of this initiative, the government has notified the Solid Waste Management Rules 2016 (the SW Rules) and the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016 (the HW Rules). The new HW Rules provide for a single window clearance for setting up a hazardous waste disposal facility and import of other wastes.<sup>26</sup> Co-processing of waste has been given preference over disposal. The approval for co-processing of hazardous waste to recover energy has been streamlined on an emission norms basis. The import or export of waste under the HW Rules was streamlined and the list of waste regulated for import or export has been revisited. Further, import of scrap metal, paper waste and various categories of electrical and electronic equipment for reuse purposes no longer needs the permission of the MoEF&CC. Since January 2016, new guidelines are in place to determine financial liability for causing contamination due to improper handling, storage, transport or disposal of hazardous substances.

The new SW Rules introduced the concept of segregating and storing the waste generated at source in three separate streams, namely biodegradable, non-biodegradable and domestic hazardous waste, in suitable bins before the same is handed over to authorised waste collectors.<sup>27</sup> Further, spot fining for littering and non-segregation has been introduced.

### v Contaminated land

The HW Rules together with the EPA, the Water Act and the rules framed by the respective state governments for the regulation of ground water provide the regime for controlling and preventing contamination of land and groundwater by the disposal of hazardous wastes. The rules impose the liability for damage caused to the environment or third party as a result of

<sup>23</sup> Rule 7 of the Manufacture, Storage and Import of Hazardous Chemicals Rules 1989.

<sup>24</sup> Rule 5 of the Manufacture, Storage and Import of Hazardous Chemicals Rules 1989.

<sup>25</sup> While the rules relating to electronic, biomedical, plastic, solid and hazardous wastes were revised, new rules relating to the management and handling of construction and demolition waste were brought into effect in 2016.

<sup>26</sup> Rules 6 and 13 of the HW Rules.

<sup>27</sup> Rule 4 of the SW Rules.

improper handling and disposal of hazardous waste on the occupier, importer, exporter and operator of a facility. The occupier and operator are also liable to financial penalties as may be levied by the SPCB in consultation with the CPCB.

## **VII CLIMATE CHANGE**

In his address at the World Economic Forum Annual Meeting in January 2018, Prime Minister Narendra Modi identified climate change as the biggest challenge facing our civilisation. This highlighted the high priority India accords to climate change and related issues. With the second-largest human population of the world, India is confronted with the serious challenge of balancing economic development and greenhouse gas emissions.

To balance its developmental imperatives with climate change adaptation and mitigation, the Indian government launched the National Action Plan on Climate Change (NAPCC) in 2008. The eight national missions that form the core of the NAPCC represent multipronged long-term and integrated strategies for achieving key goals in the context of climate change. The two most prominent missions are the Jawaharlal Nehru National Solar Mission, which seeks to promote solar energy by enhancing the capacity to 100GW by 2022; and the National Mission for Enhanced Energy Efficiency, which seeks to unlock the energy-efficiency market on a public-private partnership basis. Under it, specific energy consumption targets have been set for 478 designated consumers across eight sectors. Incentivising action through trading in energy-saving certificates is envisaged under this mission.

It is pertinent to discuss some of the key initiatives for climate change adaptation and mitigation.

### **i Clean Energy Initiative**

In April 2018, the Prime Minister announced 100 per cent electrification of Indian villages. This essentially meant that, while electricity had reached every village in India, by all estimates it would reach every household by the end of the year 2018. While this is a huge achievement for a developing economy like India, to ensure that it meets its nationally determined contribution commitments under the Paris Agreement, India must ensure that it shifts to clean energy. To achieve its emission-reduction targets, India has set itself the goal to achieve a solar power capacity of 100GW by 2020. This would help India honour its climate change commitments.

As a part of its clean coal technology initiative, India has mandated all new large coal-based generating stations to use supercritical technology, besides setting mandatory targets for old thermal power stations to improve energy efficiency; however, more than 60 per cent of India's energy requirement is still based on thermal energy and the transformation from coal to clean energy must therefore be gradual. As part of its commitment towards clean energy, India also introduced the National Clean Energy Fund 2010 (NCEF), which imposed a statutory cess on coal. The NCEF is used to promote clean energy technologies. Further, the Central Electricity Regulatory Commission (CERC) also issued a Renewable Purchase Obligations Regulation, specifying the share of renewable energy in the electricity mix. In order to assist in meeting renewable purchase obligations, the CERC has set up the renewable energy certificate mechanism enabling the obliged entities to purchase renewable energy certificates to meet their commitments.

## **ii Green Buildings Initiative**

Residential and commercial buildings currently account for about a third of the total electricity consumption in India, a significant part of which goes into heating, cooling and lighting. Therefore, the government has taken a number of initiatives to promote energy efficiency in the building sector. The Bureau of Energy Efficiency has developed the Energy Conservation Building Code, which prescribes the minimum standard for energy use in new commercial buildings and major retrofits. The code is voluntary at the national level and the Ministry of Urban Development and state governments are responsible for its implementation and enforcement. LEED India is the localised version of the international rating system and is administered by the Indian Green Building Council. With 752 LEED-certified projects covering over 20.28 million gross square meters of space in December 2017, India ranks third in the list of US Green Buildings Council annual rankings.

A Green Rating for Integrated Habitat Assessment (GRIHA) is the national rating system for green building design, developed and implemented by the Energy and Resources Institute and the Ministry of New and Renewable Energy. All new central government and public sector buildings in India are to comply with the requirement of at least three star GRIHA ratings. Further, the Department of Telecommunication has also issued certain guidelines for licensees to promote energy efficiency and renewable energy in all their establishments.

## **iii Mobility and public transportation**

The public transportation infrastructure in India has grown substantially in the last few decades but in the major cities such as Delhi it is still less than a third of the requirement. Clean and efficient modes of mobility remain a challenge for India. With its burgeoning population and clean air challenges, India has already taken the leap from BS-IV to BS-VI emission standards and, as per the direction of the Supreme Court of India, no vehicle that does not adhere to BS-VI emission norms will be sold in India from 1 April 2020. BS-VI compliant fuel is already available in Delhi. Petrol vehicles older than 15 years and diesel vehicles older than 10 years have already been banned in Delhi, the government has already started ordering electric vehicles for its offices, and to dispose of old vehicles, Delhi has notified the guidelines for scrapping old vehicles, though its implementation remains a challenge.

In the aviation sector, the Director General of Civil Aviation has issued various circulars to promote efficiency by addressing issues regarding use of aircraft power supply, fuel efficiency, single-engine taxi and data reporting. Indian Railways has already launched its first solar-powered train and first solar-powered railway station. In November 2018, the Prime Minister launched India's first multimodal terminal on inland waterways as a part of the World Bank-aided Jal Marg Vikas Project. Be it roadways, railways, airways or waterways, there is an unprecedented push by India on non-polluting modes of mobility.

## **VIII OUTLOOK AND CONCLUSIONS**

India is witnessing an unprecedented phase of stringent environmental norms and stricter enforcement. The new laws focus on self-regulation, while imposing severe penalties for misrepresentation or suppression of facts and providing for environmental offences being cognisable and non-bailable. The proactive role of the judiciary, especially the NGT, has ensured that compliance is mandatory. Forfeiture of bank guarantee by SPCBs, imposition of heavy fines on violators, issuance of closure notices and other such stringent steps are the

order of the day. Invoking the 'deep pocket principle' and the 'last man standing principle' is a common practice. Assessing and addressing environmental risk is material to doing business in India. Regulations are being revised rapidly. Environmental risk is no longer a technical issue, but has to be seen in light of public perception and community expectations.

India has moved down from rank 141 in the Environment Performance Index (EPI) 2016 to rank 177 in EPI 2018, resulting in a fair share of criticism. However, the complete ban on plastic in various states, and initiatives to ensure that plastic waste management and handling is carried out in an effective way has also won the country accolades internationally. With a rapidly increasing population, India is gearing up to manage its waste more effectively.

Environmental consciousness in India has moved from philanthropy to the mandatory corporate social responsibility. The companies in India pay much more attention to water conservation, afforestation, pollution control, mitigation and the related health and safety issues. With stricter enforcement, non-compliance is no longer an option. The focus has shifted from compliance and operational risks to sustainability risks involving water, waste, climate change, energy efficiency, product safety and regulatory changes. Environmental issues are now determining the business strategy in India.



# ITALY

Gianluca Atzori<sup>1</sup>

## I INTRODUCTION

Italian environmental law began on 8 July 1986, with the law setting up the Ministry of the Environment and providing for the first regulation on environmental damage.<sup>2</sup> Sector-based legislation was then adopted, until 2006 when Legislative Decree 3 April 2006, No. 152, introduced the Italian Environmental Code, governing the whole area. Most of the legislation in this field is due to legislation at the European level. However, Italian public opinion, like that in many other countries, is also increasingly sensitive to environmental matters, encouraging public institutions to act and adopt more stringent standards for the protection of the environment.

Indeed, Italian environmental law has recently been subject to significant substantive reforms. In particular:

- a* the Environmental Impact Assessment (EIA) system has been redesigned, introducing mandatory terms for the conclusion of the procedures and enhancing the integration of the EIA with other environmental permits, such as the Integrated Pollution Prevention and Control (IPPC) permit.<sup>3</sup> In an effort to guarantee compliance by the public administrations with the deadlines for the conclusion of the proceedings, the new law imposes liabilities on the public officials accountable for failure to conclude EIA proceedings within these deadlines. Moreover, oil refineries and power plants with a thermal power above 300MW are now required to provide an assessment of the impact of the plant on public health;
- b* byproducts have been regulated more thoroughly, in an effort to provide more clarity on the requirements to be fulfilled in order for a material to be classified as a byproduct and exempted from the regulations applicable to waste;<sup>4</sup>
- c* the IPPC system has been redesigned, introducing significant changes in the content of IPPC permits, and amending the IPPC renewal and amendment process and the penalties system;<sup>5</sup>

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2 Law 8 July 1986, No. 349; it should be noted that other pieces of legislation addressing sectorial environmental issues were adopted even before 1986.

3 Legislative Decree 16 June 2017, No. 104 amended Title III of Part II of Legislative Decree 3 April 2006, which is the title dedicated, *inter alia*, to the EIA within the Italian Environmental Code.

4 See Ministerial Decree 13 October 2016, No. 264.

5 Legislative Decree 4 March 2014, No. 46 amended the entire Title III *bis* of Part II of Legislative Decree 3 April 2006, No. 152, which is the title dedicated to the IPPC system within the Italian Environmental Code.

- d* a comprehensive set of environmental crimes has been introduced in the Italian Criminal Code and in the Italian Environmental Code. It includes new crimes concerning conduct that did not have any criminal relevance in the past and provides for much harsher penalties than those generally provided for in the past for the existing environmental offences;<sup>6</sup> and
- e* a special environmental law system was designed to address the complex scenario in which allegations of mass pollution of the environment were made by the local prosecutor against the largest steel company in the country. However, at the same time, the plant that allegedly caused the pollution employed so many people in an economically depressed area that the Italian government adopted emergency laws to avoid the immediate shutdown of the plant, citing reasons of national interest. This special environmental law system, which to date has been applicable virtually only to this specific scenario, *inter alia*, provides a tool to pierce the corporate veil and attach liability to the shareholders of a company, if the company has caused significant environmental damage.<sup>7</sup>

While the Italian government was required by EU law<sup>8</sup> to implement the IPPC system reform, the new environmental criminal offences and the special environmental law system originated from internal public opinion.

On the issue of climate change, energy policies play a crucial role. In this respect, in the 2011 Italian referendum, the people voted against the development of nuclear power plants. Moreover, in 2013, thanks to a strong incentive policy, Italy already reached its 2020 goal for the production of renewable energy, which was established by the European Union.

The current Italian Ministry of the Environment has declared its firm commitment to the Paris Agreement (COP 21), which was ratified by Italy in November 2016.

Recently, Italy has also imposed significant non-financial (e.g., environmental) information disclosure duties on large companies and groups (see Section V below).<sup>9</sup>

## II LEGISLATIVE FRAMEWORK

The most important piece of legislation is the Italian Environmental Code. The Italian Environmental Code provides for:

- a* the general principles of Italian environmental law;
- b* the procedures for EIAs, strategic environmental assessments and IPPC permits;

<sup>6</sup> Law 22 May 2015, No. 68 amended both the Italian Criminal Code and the Italian Environmental Code, introducing a broad variety of new environmental crimes.

<sup>7</sup> In particular, under certain conditions, the state commissioner – who, given the emergency, has replaced the administrative board of the company – is entitled to request a competent tribunal to release funds seized from the shareholders of the company in the context of investigations for alleged criminal offences even unrelated to environmental damage. The commissioner must then use the released funds to remediate the environmental damage caused by the company. See Section 11(5) of Article 1 of Law Decree 4 June 2013, No. 61, converted into law by Law 3 August 2013, No. 89.

<sup>8</sup> See Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control).

<sup>9</sup> See Legislative Decree 30 December 2016, No. 254, implementing Directive 2014/95/EU amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.

- c* rules for the protection of soil, the fight against desertification and the protection of water sources from pollution;
- d* rules for waste management and clean-up procedures;
- e* rules for air emissions and the protection of the atmosphere;
- f* rules on environmental damage; and
- g* administrative and criminal penalties for infringements of environmental laws.

Other important sources of law are:

- a* Law 4 November 2016, No. 204, which ratifies the Paris Agreement of 12 December 2015;
- b* Legislative Decree 22 January 2004, No. 42, the Italian Code of Cultural Heritage and Landscape;
- c* Legislative Decree 17 August 1999, No. 334, on the control of major-accident hazards involving dangerous substances (the Seveso Law);
- d* Legislative Decree 8 June 2001, No. 231, which provides for the liability of legal persons for crimes committed by their managers and employees. Many environmental crimes trigger liability for legal persons under this Legislative Decree;
- e* Presidential Decree 13 March 2013, No. 50, which introduced the single environmental authorisation, an authorisation that materially reduced the regulatory burden on small and medium-sized companies, including a single authorisation for all of the necessary environmental permits (e.g., wastewater discharges and air emissions);
- f* Legislative Decree 13 March 2013, No. 30, establishing a scheme for greenhouse gas emissions allowance trading within the European Union, in respect of the Kyoto Protocol's mechanisms; and
- g* Legislative Decree 19 August 2005, No. 195, granting access to the public for all environmental information possessed by a public authority.

The Treaty on the Functioning of the European Union (TFEU) (Articles 191, 192 and 193) grants competence in the environmental field to the European Union. However, EU Directives, as opposed to EU Regulations, require Member States to implement the relevant provisions of EU Directives in national legislation and that implies a margin of appreciation. Moreover, and most importantly, Article 193 of the TFEU provides that the protective measures adopted by the European Union 'shall not prevent any Member State from maintaining or introducing more stringent protective measures. Such measures must be compatible with the Treaties'. That means that the environment is a field where there is minimum harmonisation: the European Union sets a minimum threshold that Member States must meet. However, national law may impose stricter thresholds (gold plating).<sup>10</sup>

### III THE REGULATORS

Environmental law enforcement is managed through a multi-level governance system. The distribution of powers among the various government levels (national, regional, local, etc.) is inspired by the subsidiarity principle.

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<sup>10</sup> In 2013, the President of the Council of Ministries adopted a guideline (Guideline of the President of the Council of Ministries, 16 January 2013) prohibiting any form of gold plating. Nonetheless, laws are a source hierarchically higher than the guideline and therefore can derogate from this prohibition.

At the national level, the Ministry of the Environment and of the Territory and Sea Protection (MATTM) is the authority competent for the enforcement of environmental and climate change rules. The MATTM is both a source of regulation, through its decrees, and an enforcer, given that it has the power to grant the main environmental permits (such as IPPC permits and EIAs) for the plants with the most significant environmental footprints and to impose administrative penalties for infringements of such permits. The MATTM is also in charge of the clean-up procedures for contaminated land located in the most polluted areas of the country (sites of national interest). The technical branch of the MATTM is the Superior Institution for Environmental Protection and Research (ISPRA), which is a public entity under the supervision of the MATTM that provides technical support (e.g., through the monitoring of the compliance of the operators with the permits granted by the MATTM or through the performance of environmental assessments commissioned by the MATTM).

Regions are also key players, since they are also a source of laws and regulations (within the limits set out in national law), and they also have the power to grant certain environmental permits (such as IPPC permits and EIAs for plants with a smaller environmental footprint than those authorised at the national level). Regions are in charge of the clean-up procedures for contaminated land located in areas different from the sites of national interest.

Certain competences are also administered at a local level by provinces or municipalities.<sup>11</sup> For instance, certain regions delegate their power to grant IPPC permits and EIAs to the provinces. Moreover, national law establishes that provinces are competent to grant certificates attesting to the successful completion of a clean-up operation.<sup>12</sup> Regions can also delegate to municipalities the power to manage clean-up operations concerning contaminated land located within the municipality's territory.

Each region has its Regional Agency for the Protection of the Environment (ARPA), which plays a similar role to ISPRA, but at a regional level. Thus, each ARPA provides technical environmental support to the region, the provinces and the municipalities.

Every decision adopted by the MATTM, the regions, the provinces and the municipalities can be challenged before regional administrative tribunals for breach of law, lack of competence of the authority that adopted the decision or 'abuse of power'. When the law grants a discretionary power to an authority, the court is not allowed to scrutinise the exercise of such power unless the decision is affected by serious flaws (e.g., obvious incoherence between the conclusions of the decision and the facts ascertained by the decision itself).

#### IV ENFORCEMENT

Liability for the infringement of environmental laws can be civil, administrative and criminal. The same fact can result in the three kinds of liability. For instance, an unauthorised release of hazardous substances into the environment can lead to civil liability for damage caused to third parties, administrative penalties (such as the suspension or withdrawal of the environmental permit) and criminal liability for the crime of polluting the environment. However, many administrative penalties apply only if the same facts are not punishable under criminal law in order to avoid the duplication of penalties for the same fact.<sup>13</sup>

11 Italy is currently in a transition period where provinces are gradually being abolished and their competences are being redistributed between regions, municipalities and new entities called 'metropolitan cities'.

12 Article 242(13) of Legislative Decree, 3 April 2006, No. 152.

13 For instance, Article 20 *quaterdecies*(2), of Legislative Decree 3 April 2006, No. 152.

The administrative proceedings to enforce clean-up liabilities upon a release into the environment can be triggered either by a notification sent to the authorities by the polluter or the innocent landowner (which must notify the authorities immediately upon the discovery of the release) or autonomously by the authorities. To attach clean-up liability to an operator, authorities must demonstrate a causal link between the operator's activities and the pollution. Until recently, prospective buyers of industrial sites, wanting to perform an environmental assessment to protect themselves from historical contamination, faced reluctance from prospective sellers. However, recent legislative reforms, amending the Italian Environmental Code, have introduced for many industrial operators the duty to sample soils at least once every 10 years and groundwater at least once every five years.<sup>14</sup> Thus, going forward, owing to the data from these samplings on the status of the site throughout such time, it should be easier to correctly establish responsibility for any pollution found.

## V REPORTING AND DISCLOSURE

Starting from 2017,<sup>15</sup> large EU public-interest entities (i.e., listed companies, credit institutions, insurance companies and other designated entities) are required to include in their management reports a 'non-financial statement' on corporate social responsibility matters. Parents of a group must issue the non-financial statement on a consolidated corporate basis. The non-financial statement must address, as a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters. The non-financial statement must contain:

*[I]nformation to the extent necessary for an understanding of the undertaking's development, performance, position and impact of its activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters, including: (a) a brief description of the undertaking's business model; (b) a description of the policies pursued by the undertaking in relation to those matters, including due diligence processes implemented; (c) the outcome of those policies; (d) the principal risks related to those matters linked to the undertaking's operations including, where relevant and proportionate, its business relationships, products or services which are likely to cause adverse impacts in those areas, and how the undertaking manages those risks; (e) non-financial key performance indicators relevant to the particular business. Where the undertaking does not pursue policies in relation to one or more of those matters, the non-financial statement shall provide a clear and reasoned explanation for not doing so.<sup>16</sup>*

In relation to environmental information, Italian legislation also requires (on top of the minimum information required by EU Directive 2014/95/EU) companies to disclose information concerning:

- a* the use of energy resources, distinguishing between renewable and non-renewable energy, and the use of water;
- b* greenhouse gas emissions and air pollution; and
- c* the impact, including in the medium-term, of the principal risks linked to the company's operations on the environment, and on health and safety measures.

<sup>14</sup> Article 29 *sexies* of the Italian Environmental Code.

<sup>15</sup> Pursuant to EU Directive 2014/95/EU.

<sup>16</sup> Article 1(1) of the Directive, introducing Article 19a into Directive 2013/34/EU.

It also provides for pecuniary penalties for management and control bodies that infringe the disclosure obligations.<sup>17</sup>

The main environmental permits usually provide for the duty to disclose to the competent authorities (indicated in the permit itself) any non-conformity, with specific regard to the emissions limits set for wastewater discharges and air emissions. The operator may claim that the non-conformity is due to a temporary malfunction of the plant, which is sometimes considered a justifiable reason for infringing the emissions limits.<sup>18</sup>

Contamination of land, or suspected sudden or historical contamination, must immediately be disclosed to the competent authorities.<sup>19</sup> However, the Italian Environmental Code only gradually introduced from 2014, for industrial operators, certain duties to carry out periodical sampling of soils and groundwater. Therefore, it cannot be excluded that a number of sites may still be affected by 'unknown' contamination, which has not been notified to any public authority.

The law does not provide for a specific duty to disclose potential environmental liabilities to prospective purchasers. However, general law imposes upon the parties to a negotiation the duty to act in good faith. Omitting to disclose information on known environmental liabilities could be an infringement of this principle, therefore triggering contractual liabilities for the seller.

Currently, the law does not provide any specific protection for whistle-blowers in the environmental field.<sup>20</sup>

## VI ENVIRONMENTAL PROTECTION

### i Air quality

The categories of industrial plants that may generate emissions with a material impact on the environment are subject to air emission permits.

Among these plants, the ones with the lower environmental impact must obtain an air emission permit pursuant to Article 269 of the Italian Environmental Code. This permit lasts 15 years, and it provides emission limits and monitoring requirements. In case of an infringement of the air emission permit, the competent authority may:

- a order the operator to comply with it within a certain term;
- b order the operator to comply with it within a certain term and suspend the operation of the plant if there is a threat towards public health or the environment; or
- c revoke the air emission permit in case of an infringement of the orders under points (a) and (b) above or when multiple breaches of the permit endanger public health or the environment.<sup>21</sup>

17 See Legislative Decree 30 December 2016, No. 254, implementing Directive 2014/95/EU amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.

18 IPPC permits may allow a certain number of infringements of emission limits for each year, but should never exceed 20 per cent of the maximum intensity allowed (Section 7 *bis* of Article 29 *sexies* of the Italian Environmental Code).

19 Article 242 of the Italian Environmental Code.

20 For future developments on this subject, and on other pending legislation regarding disclosure duties, see Section VIII.

21 Article 278 of the Italian Environmental Code.

Also, criminal and administrative penalties are provided, depending on the gravity of the infringement of the permit.<sup>22</sup>

Plants with a higher environmental impact are likely to fall within the IPPC system and therefore need an IPPC permit, which includes a section dedicated to air emissions. Under the IPPC system, the emission limits must be coherent with the emission levels associated with the best available technique, established at the EU level.<sup>23</sup> As already highlighted in Section II, Member States are allowed to require stricter limits (gold plating), but a guideline issued by the Italian President of the Council of Ministries should prevent Italian authorities from doing so. IPPC permits can last up to 16 years.<sup>24</sup> In the event of an infringement of an IPPC permit, the competent authority has the same powers as those granted by the Italian Environmental Code to the authorities for an infringement of an air emission permit (i.e., order to comply, suspend and revoke the permit, under the same conditions laid down for air emission permits).<sup>25</sup> Moreover, criminal and administrative penalties are provided depending on the gravity of the infringement of the IPPC permit.<sup>26</sup>

## ii Water quality

The mechanism for the granting of wastewater discharge permits is designed in a similar way to the system for the granting of air emission permits.

Plants with a lower environmental impact are subject to wastewater discharge permits,<sup>27</sup> while bigger plants fall within the IPPC system.

As to the first regime, in the event of an infringement of a wastewater discharge permit, the competent authority may: (1) order the operator to comply with it within a certain term; (2) order the operator to comply with it within a certain term and suspend the operation of the plant if there is a threat towards public health or the environment; or (3) revoke the wastewater discharge permit in case of an infringement of the orders under point (1) and (2) above or when multiple breaches of the permit endanger public health or the environment.<sup>28</sup> Also, criminal and administrative penalties are provided depending on the gravity of the infringement of the permit.<sup>29</sup>

As to the second regime, as already noted in Section VI.i on air emissions, IPPC permits have to be aligned with the emission levels established at the EU level. IPPC permits can last up to 16 years.<sup>30</sup> In the event of an infringement of an IPPC permit, the competent authority has the same powers as those granted by the Italian Environmental Code to the authorities for an infringement of a wastewater discharge permit (i.e., order to comply, suspend and revoke the permit under the same conditions laid down for wastewater discharge permits).<sup>31</sup>

22 Article 279 of the Italian Environmental Code.

23 Article 29 of the Italian Environmental Code.

24 Article 29 *octies* of the Italian Environmental Code.

25 Article 29 *decies* of the Italian Environmental Code.

26 Article 29 *quattuordecies* of the Italian Environmental Code.

27 For industrial discharge and domestic discharge. Rainwater discharge is regulated at a regional level: it is up to each region to decide whether to require a specific permit for the discharge of rainwater. Wastewater discharge permits last four years (Article 124 of the Italian Environmental Code).

28 Article 130 of the Italian Environmental Code.

29 Articles 133 and 137 of the Italian Environmental Code.

30 Article 29 *octies* of the Italian Environmental Code.

31 Article 29 *decies* of the Italian Environmental Code.

Moreover, criminal and administrative penalties are provided depending on the gravity of the infringement of the IPPC permit.<sup>32</sup>

### iii Chemicals

The regime for chemicals that are hazardous to health and the environment is regulated at the EU level. To guarantee coherence in the manufacture, placement on the market and use of chemical substances, the EU adopted Regulation No. 1607/2006 concerning the registration, evaluation, authorisation and restriction of chemicals (the REACH Regulation)<sup>33</sup> is – like every EU Regulation – directly applicable in all of the EU Member States, without the need to transpose it through national implementing legislation.

Under the REACH Regulation, the manufacture, placement on the market and use of certain substances, mixtures and articles may be subject to restrictions.<sup>34</sup> Manufacturers, importers and downstream users are not allowed to use, or place on the market for use, substances referred to in Annex XIV of the REACH Regulation unless, *inter alia*, the use or placement on the market of the substances has been authorised in accordance with the regulation.<sup>35</sup>

Pursuant to Article 68(1) of the REACH Regulation, where there exists an unacceptable risk to human health or the environment arising from the manufacture, use or placement on the market of substances that needs to be addressed on an EU-wide basis, Annex XVII of the REACH Regulation shall be amended by adopting new restrictions or strengthening the existing ones. Any such decision shall take into account the socio-economic impact of the restriction, including the availability of alternatives. In accordance with Article 69, such process is triggered by Member States or the European Commission and involves the EU Chemicals Agency. For a new restriction to be imposed it must be shown that: the manufacture, placement on the market or use of a substance on its own, or in a mixture or in an article, poses a risk to human health or the environment; and such risk is not adequately controlled and needs to be addressed at the EU level.<sup>36</sup> The European Commission adopts the final decisions on proposals for restrictions submitted by Member States or the EU Chemicals Agency.<sup>37</sup>

32 Article 29 *quattuordecies* of the Italian Environmental Code.

33 Regulation (EC) of the European Parliament and of the Council of 18 December 2006, No. 1907/2006, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396/1), as amended several times.

34 *id.*, Articles 68–73 and Annex XVII.

35 *id.*, Article 56.

36 REACH Regulation, Annex XV (Dossiers), Section II.3. Justification shall be provided that action is required on an EU-wide basis, and a restriction is the most appropriate EU-wide measure, which shall be assessed using the following criteria: effectiveness (the restriction must target the effects or exposures that cause the risks identified and be capable of reducing these risks to an acceptable level within a reasonable period of time and proportional to the risk); practicality (the restriction must be implementable, enforceable and manageable); and monitorability (it must be possible to monitor the result of the implementation of the proposed restriction).

37 *id.*, Articles 70–73.



Authorities proposing a restriction are also requested to perform a socio-economic analysis aimed at demonstrating that the net benefits to human health and the environment of the proposed restriction outweigh the net costs to manufacturers, importers, downstream users, distributors, consumers and society as a whole. In addition, available information on alternative substances and techniques shall be provided, including information on: the risks to human health and the environment related to the manufacture or use of the alternatives; the availability of alternative substances, including the respective time scale; and their technical and economic feasibility.<sup>38</sup>

The REACH Regulation also envisages an authorisation system aimed at monitoring the risks posed by substances of very high concern,<sup>39</sup> which must be progressively replaced by suitable alternative substances or technologies to the extent that they are economically and technically viable.<sup>40</sup>

#### iv Solid and hazardous waste

Waste management is heavily regulated and infringements in this field often lead to criminal penalties. The generation, transport and disposal of waste is regulated by the Italian Environmental Code.

As a general rule, Article 188 of the Italian Environmental Code provides for the liability of the waste generator for the whole chain of treatment of the waste. Indeed, the generator must verify that the transporter and the subject in charge of the recycling or disposal of the waste possesses all of the necessary authorisations, and that the documents that need to be filled in to track each step of the waste management are duly drafted and managed. Recently, the Italian Supreme Court submitted a request for a preliminary ruling to the Court of Justice of the European Union on the interpretation of EU environmental law concerning the sampling, analysis and classification of waste.<sup>41</sup> The preliminary ruling of the Court of Justice of the European Union will hopefully provide clarity on a matter that is crucial for the entire waste management system.

Every operator involved in waste management must provide the competent authority with adequate financial guarantees relating to compliance with applicable environmental laws. In particular, waste transportation, recycling and disposal, as well as the management of solid urban waste, are subject to financial guarantees.

For years, the Italian government has tried to switch from an inefficient waste-tracking system based on paper documents to an electronic tracking system, featuring GPS technology and a national database of the waste produced, transported and disposed of in the country (the SISTRI system). The entry into force of the new tracking system has been postponed several times owing to technical malfunctions, and in January 2019 definitively aborted. Currently, the paper-based system is still in place, and the Ministry of Environment is working on a new electronic waste-tracking system, hopefully simpler and more efficient than the SISTRI System.

38 *ibid.* See also REACH Regulation, Annex XVI (Socio-Economic Analysis), which, *inter alia*, sets out the information to be covered in a socio-economic analysis submitted in connection with a proposed restriction.

39 *i.e.*, substances that are: carcinogenic, mutagenic or toxic to reproduction; persistent, bio-accumulative and toxic; very persistent and bio-accumulative; and seriously or irreversibly damaging to the environment or human health, such as substances damaging to the hormone system. *Id.*, Article 57.

40 *id.*, Article 55.

41 See Italian Supreme Court (Corte di Cassazione) Order, 27 July 2017, No. 37460.

With respect to the ‘end of waste’ procedure to recover waste, a recent ruling of the Council of State<sup>42</sup> prohibited to governmental entities the possibility to authorise the end of waste recovery case by case. Instead, according to this ruling, end-of-waste recovery is only allowed when a statutory provision provides as such. Given that statutory provisions allowing for end-of-waste recovery cover few categories of waste, the ruling *de facto* significantly reduced the possibility to recover waste through this procedure. On 19 July 2018, the Ministry for the Environment declared to Parliament the government’s intention to amend the Italian Environmental Code to reinstate the possibility for governmental authorities to authorise end-of-waste procedures on a case-by-case basis.

## v Contaminated land

The remediation of contaminated land and groundwater is based, in Italy and in the European Union, on the ‘polluter pays’ principle.<sup>43</sup> In other words, the system is designed to impose remediation duties and costs on the polluter. If the polluter cannot be identified or fails to adopt the necessary measures, and neither the owner of the site nor any other interested party adopts those measures, they are to be adopted by the competent administrative authorities at the expense of the polluter.<sup>44</sup> Innocent landowners may be required to reimburse the costs relating to the measures adopted by the competent authority that has remediated the site but only within the limits of the market value of the land, determined after the implementation of those measures. The owner or any other interested person may, however, intervene on a voluntary basis at any time in order to clean up the site that they own or use.<sup>45</sup> The innocent landowner that has remediated the polluted site on a voluntary basis is entitled to bring an action for damages against the polluter in respect of costs incurred and any additional damage suffered.<sup>46</sup>

In certain cases, in open contrast with the Italian Environmental Code, innocent landowners have been requested by public authorities to remediate their site when the polluter could not be identified or failed to adopt the necessary measures to remediate the pollution. Recently, a minority of the Italian case law has supported the legitimacy of this approach.<sup>47</sup> However, the Plenary Assembly of the Italian Council of State (i.e., the highest administrative court, in charge of solving case law conflicts, whose ruling is binding for lower administrative courts) has upheld the principle according to which the innocent landowner cannot be required to remediate pollution that it has not caused.<sup>48</sup> The plenary assembly had also requested a preliminary ruling from the Court of Justice of the European Union (CJEU) on whether EU environmental principles must be interpreted as precluding national legislation:

*... which, in cases where it is impossible to identify the polluter of a plot of land or to have that person adopt remedial measures, does not permit the competent authority to require the owner of the*

42 See Italian Council of State Judgment 28 February 2018, 1229.

43 The ‘polluter pays’ principle is mentioned in Article 191 of the Treaty on the Functioning of the EU and Article 3 *ter* of the Italian Environmental Code.

44 Article 242 of the Italian Environmental Code.

45 Article 245 of the Italian Environmental Code.

46 Article 253 of the Italian Environmental Code.

47 See, *ex multis*, Council of State Opinion of Section II, 23 November 2011, No. 2038/2012.

48 Plenary Assembly of the Council of State Judgment 25 September 2013, No. 21.

*land (who is not responsible for the pollution) to adopt preventive and remedial measures, that person being required merely to reimburse the costs relating to the measures undertaken by the competent authority within the limit of the market value of the site, determined after those measures have been carried out.*<sup>49</sup>

The CJEU ruled that EU environmental law did not preclude such national legislation.<sup>50</sup>

However, the consistency with EU law of the provision of the Italian Environmental Code, as interpreted by the Plenary Assembly of the Council of State, does not exclude *per se* that the CJEU might consider other interpretations of domestic law as compatible with EU law. The CJEU stated that Italian legislation, as interpreted by the Plenary Assembly of the Council of State to the effect that it is not legitimate to impose the duty to carry out remedial actions on innocent landowners, is compatible with EU law. However, the CJEU also pointed out that EU law allows Member States to adopt more stringent measures, including through the identification of additional responsible parties, provided that these measures are compatible with the Treaty on the European Union and the Treaty on the Functioning of the European Union. Indeed, in July 2017, the CJEU declared compatible with EU law a Hungarian piece of legislation establishing joint liability between the innocent owner of the land on which the pollution occurred and the polluter, without it being necessary to establish a causal link between the conduct of the owner and the damage established.<sup>51</sup> Therefore, it could be argued that the minority opinion in current Italian case law (while in open contrast with the Italian Environmental Code) would also be compatible with EU environmental law.

## VII CLIMATE CHANGE

Climate change is addressed in a number of ways in Italy, which has firmly committed to the United Nations Framework on Climate Change. Italy has recently ratified the Paris Agreement by means of the Law of 4 November 2016, No. 204, and the Italian Ministry of the Environment has declared that ‘for Italy, a green economy is a clear and irreversible choice. On climate change there is no way back.’<sup>52</sup>

In 2006, greenhouse gas emissions trading was established, and it is now governed by Legislative Decree of 13 March 2013, No. 30.

A number of incentives are in place for renewable energy and are generally granted for the whole duration of the life of the plant. In 2017, the Italian Constitutional Court upheld the legitimacy of a law that retroactively reduced the incentives contractually granted to operators of photovoltaic plants.<sup>53</sup> The decision was based on, *inter alia*, the following arguments:

- a* the sudden decrease in the costs of production of energy in the photovoltaic energy market, which the Court took into account to justify the retroactive effect of the law under scrutiny;

<sup>49</sup> Plenary Assembly of the Council of State Judgment 25 September 2013, No. 21.

<sup>50</sup> Court of Justice of the EU Judgment 4 March 2015, C-534/13, *Fipa et al.*

<sup>51</sup> Court of Justice of the EU Judgment 13 July 2017, C-129/16, *Türkevi Tejtermelő Kft v. Országos Környezetvédelmi és Természetvédelmi Főfelügyelőség.*

<sup>52</sup> L’Unità, 9 September 2016, interview with Mr Galletti, Ministry of the Environment.

<sup>53</sup> See Constitutional Court Judgment 24 January 2017, No. 16.

- b* the law was also deemed reasonable and proportionate because it did not completely eliminate the incentives but reduced them by 6–8 per cent, providing alternative compensative measures for the affected operators (e.g., the possibility to obtain subsidised loans);
- c* the law reduced energy costs for consumers, who were charged for the incentives through a component of the energy tariff. The Court weighed this element in favour of the retroactive law, emphasising its positive effects for consumers; and
- d* the retroactive reduction of the incentives was not unforeseen or unforeseeable at the time of execution of the contracts, because there were a number of provisions of law that anticipated the possibility of a reduction of the incentives. Thus, in the opinion of the Court, a diligent operator should have foreseen such reduction.

Since 2017, owing to EU constraints, incentives for renewable energy plants have been awarded only through reverse auction systems, while in the past there were also forms of direct access to incentives, already pre-determined by law. Also, renewable energy dispatching has been prioritised in respect of other sources of energy. Owing to these incentives, Italy is already satisfying more than 17 per cent of its energy needs through renewable energy, reaching the goal established by the European Union for 2020.

Since 2004, energy efficiency has also been incentivised, through white certificates, also known as energy efficiency certificates (EECs). EECs are granted by the competent public authority upon proof of the achievement of energy savings through energy efficiency improvement projects. Electricity and natural gas distributors are required to achieve yearly quantitative energy savings targets, expressed in tonnes of oil equivalent saved. Each certificate is worth one tonne of oil equivalent saved.

Finally, Article 29 of the Italian Environmental Code provides that IPPC permits must include greenhouse gas emissions limits when necessary to prevent local pollution of the environment.

## VIII OUTLOOK AND CONCLUSIONS

In conclusion, the recent reforms described in Section I (namely, the reform of the EIA and IPPC systems, the introduction of new environmental crimes and the special environmental law system) all have an element in common. This common element is the tendency of the system towards providing real, actual and substantial protection of the environment, as opposed to the old schemes, which often focused on formal obligations that constituted unnecessary burdens on operators and were not always linked to a concrete environmental benefit. One example of this tendency is the new penalties system applicable to infringements of IPPC permits. Before the reform, every IPPC permit infringement, even a minor one with no impact on the environment, constituted a criminal offence and was punished with modest penalties. Today, only the infringements that actually impact the environment constitute criminal offences, but the penalties are generally higher than they were in the past.

Thus, national environmental law seems to be moving, slowly but steadily, towards more effectively protecting the environment, removing unnecessary constraints on operators and strengthening the penalties for conduct that actually impacts on the environment.

# MEXICO

*Ricardo Eloy Evangelista Garcia and Mariana Arrieta Maza<sup>1</sup>*

## I INTRODUCTION

In Mexico, the environmental statutes are administered, as set forth in the Mexican Constitution, in partnership between the federation, states and the municipalities. Consequently, there is a vast amount of legislation ruling environmental matters owing to the federation, states and municipalities having powers to redact and enact their own environmental laws, regulations and standards. In this regard, the Mexican environmental legal framework is complex and extensive.

In addition, in recent years, the Mexican environmental legal framework has undergone important modifications.

In 2011, owing to the human rights reform, the Federal Code of Civil Procedure was modified to contemplate collective actions, and promotion of the defence of affected interests and rights of a collective in matters of consumer relations of goods or services, public or private and with regard to the environment.

The Federal Law for Environmental Liability was published (on 7 June 2013) and entered into force on 7 July 2013. This law foresees the action to claim environmental liability for causing an environmental damage.

During mid 2013, there was a major reform in the energy sector. One of the most important contributions in said reform was the creation of a new government entity specifically created to regulate and verify compliance of all environmental and safety matters and regulations within the hydrocarbon sector, the National Agency for Safety, Energy and Environment (ASEA). Since its creation, ASEA has been issuing and continues to issue the required regulations and norms to provide the technical elements for the industrial and operative security, as well as the protection of the environment for the development of hydrocarbon activities, in order to promote, leverage and develop such activities in a sustainable way.

On 5 June 2018, the Ministry of the Environment and Natural Resources (SEMARNAT) published in the Federal Official Gazette the new General Law for the Sustainable Forestry Development, abolishing the previous law published on 25 February 2003. The new law seeks to:

*promote new structural changes within the forestry sector that may address the grave problems that the forests in Mexico face, especially problems related with overgrazing, changes in forestry land use,*

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*forestry fires, plagues and diseases, as well as improper management of forests that have resulted in the loss of forestry ecosystems and their biodiversity and environmental services provided by them. The new law also seeks to be an updated legal framework in the topic to make it coherent with the various modifications that have been incorporated over the last few years to other legal dispositions within the Mexican Environmental Legal Framework in matters of conservation, economic and social development and climate change.*<sup>2</sup>

## II LEGISLATIVE FRAMEWORK

The main environmental statutes and regulations currently in force that set forth the basis for federal, state and municipal enforcement are as follows:

- a* the Mexican Constitution;
- b* the General Law for Ecological Balance and Environmental Protection (LGEEPA), and its regulations;
- c* the General Law for the Prevention and Comprehensive Management of Waste and its regulation;
- d* the Federal Environmental Liability Law;
- e* the National Water Law and its regulation;
- f* the General Law for the Sustainable Forestry Development, and its regulation;<sup>3</sup>
- g* the Wildlife Law, and its regulation;
- h* the Law of the National Agency for Industrial Security and Environmental Protection for the Hydrocarbons Sector;
- i* the Biosecurity of Genetically Modified Organisms Law and its regulation;
- j* the General Law on Climate Change and its regulation; and
- k* the Mexican Official Standards (NOM) and Mexican Standards (the former are mandatory and the latter voluntary, unless there is no NOM published on the subject).

In addition, at a local level, states and municipalities have their own legal framework in accordance with the federal legal framework.

## III THE REGULATORS

Concerning regulatory authorities, a similar situation presents itself as the federation, the states and the municipalities may enforce their regulations through their own environmental authorities. However, at the federal level, the most important environmental authority is SEMARNAT and the agencies with specific powers on environmental matters, such as:

- a* the Federal Environmental Protection Agency (PROFEPA) with regard to verification, vigilance and enforcement of the law;
- b* the ASEA with regard to verification, vigilance and enforcement of the law in the hydrocarbon sector;

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<sup>2</sup> Ruling from the United Chambers of Environment and Natural Resources, Urban Development and Land-Use Planning and of Legislative Studies from the Mexican Senate, dated 17 April 2018 ([http://infosen.senado.gob.mx/sgsp/gaceta/63/3/2018-04-17-1/assets/documentos/Dict\\_MEDIO\\_AMBIENTE.pdf](http://infosen.senado.gob.mx/sgsp/gaceta/63/3/2018-04-17-1/assets/documentos/Dict_MEDIO_AMBIENTE.pdf)).

<sup>3</sup> New regulation for the General Law for the Sustainable Forestry Development, published 5 June 2018, is still pending and shall be issued no later than 180 business days following the publication of the law in the Federal Official Gazette.

- c* the National Water Commission (CONAGUA) with regard to verification, vigilance and enforcement of the law concerning water consumption, wastewater discharge and occupancy of federal property; and
- d* administrative offices that aid SEMARNAT in the enforcement of the law, such as the National Forestry Commission and the National Institute of Ecology and Climate Change.

#### **IV ENFORCEMENT**

The enforcement of environmental matters is a federal, state and municipal joint task. At the federal level, SEMARNAT is in charge of ensuring environmental compliance and sustainable development.

To exercise its authority, it is supported by the following agencies:

- a* PROFEPA: its main function is to ensure compliance with environmental laws and contribute to sustainable development by conducting environmental audits, inspections and imposing sanctions.
- b* ASEA: it regulates, supervises and even imposes sanctions regarding environmental protection related to hydrocarbon activities, including air emissions, waste and environmental impact aspects.
- c* CONAGUA: its main purpose is to administer and preserve national waters to achieve the sustainable use of this resource. It grants permissions and concessions for the use of water resources and has the power to inspect in order to monitor compliance with regulations related to water and water pollution.

At the local level, both states and municipalities have environmental ministries or offices aided in many cases by environmental protection agencies (following PROFEPA's structure).

The enforcement of environmental regulations is mainly executed through the following methods.

##### **i Permits and licences**

There are a number of mandatory permits and licences to be obtained by private parties depending on the characteristics of the project or activity to be executed by said party, which are granted by the regulating authorities whenever the projects comply with certain conditions and requirements (legal requirements). The detection of irregularities in the requirements necessary for granting permits and licences is the first assessment of environmental legal compliance.

##### **ii Terms and conditions**

Regulating agencies when granting permits and licences impose certain terms and conditions, aimed at observing the principles of environmental protection and reduction of pollution, which holders of said permits and licences must observe during the time they operate their project or carry out their activities.

##### **iii Inspections**

The regulating agencies are empowered to order inspections to determine if environmental regulations are being observed and complied with. If not, authorities may require the inspected party to immediately adopt corrective or urgent measures needed to comply with

applicable laws and regulations or begin administrative proceedings for the imposition of sanctions; or even inform the Public Prosecutor about any violations observed during the inspection that may constitute a criminal offence.

Currently, authorities at the federal, state and municipal levels develop their inspections and visits in accordance with the procedures established by their own applicable laws. However, as this situation has proven to be unhelpful with regard to the legal certainty of the individuals during the development of the inspection visits, there was an Amendment Initiative of the LGEEPA (Amendment), which was approved by Mexican senators on 28 September 2017 and discussed by the Chamber of Deputies. On 11 October 2018, this Amendment Initiative was concluded by the board of the Chamber of Deputies.

This Amendment had the purpose, among others, of consolidating the administrative procedures of environmental inspections from two aspects: horizontal and vertical. The horizontal aspect sought to consolidate a sole administrative procedure of environmental inspection for all the instruments (required permits, licences and authorisations) that are established in federal environmental law (exclusively ruled by the LGEEPA). The vertical aspect intended to consolidate a sole administrative proceeding for the operation of the vigilance authorities from the three governmental levels. Therefore, the amendment would have allowed the authorities to use a sole and single inspection procedure to verify the compliance with the law that each authority has the power to enforce.

Although declared as concluded, the subject can be presented for analysis again by means of a new amendment initiative.

#### **iv Sanctions and remedies**

As a result of administrative proceedings, the authorities may impose sanctions, such as:

- a* fines up to 50,000 days of minimum wage (approximately US\$256,700);
- b* closures (temporary or definitive);
- c* administrative arrest for up to 36 hours;
- d* seizure, suspension or annulment of permits and authorisations; and
- e* confiscation of instruments, specimens, products or byproducts directly related to infractions relative to forest resources, species of flora and fauna or genetic resources.

#### **v Judicial proceedings**

Environmental proceedings can be civil, criminal or administrative in nature. The majority of proceedings are administrative in nature. Therefore, the Administrative Court has created 'Special Halls on Environmental and Regulatory Matters' to provide technical and specific attention to environmental cases. Judicial proceedings can be accessed both by private parties against regulators for infringement of their rights or by regulators themselves (i.e., environmental damage and environmental liability actions).

#### **vi Collective actions**

Owing to the reform in 2011 of the Federal Code of Civil Procedure, civil actions were incorporated into the Mexican legal framework (the Fifth Book of the Code). These actions proceed in two matters:

- a* consumer protection matters: 'consumption of assets and services, public or private'; and
- b* environmental matters: 'the environment'.



In this regard, collective actions can be brought to: protect diffuse and collective rights and interests (i.e., those held by undetermined individuals that belong to a group owing to factual or legal reasons); and protect individual rights and interests with a collective incidence (i.e., those held by determined individuals that belong to a group owing to legal reasons).

#### **vii Environmental liability actions:**

On the other hand, owing to the creation and publication of the Federal Environmental Liability Law in June 2013, both private and public parties were granted the right to enforce environmental liability actions against parties causing environmental damage so that the latter can be repaired or compensated, and the responsible party judged for causing it.

Both actions (collective and environmental liability actions) empower NGOs to enforce them on behalf of either the affected communities or on behalf of the individuals belonging to an affected community, that is, on behalf of those whose rights were violated as long as certain conditions are met (i.e., they were legally incorporated one year prior to exercising the action).

#### **viii Public consultations**

This is a preventive incidence method granting NGOs and particular parties the right to be involved in the administrative process of approving the development and operation of certain project or activity. Environmental legislation foresees stages when proceedings are opened to the public so that they can submit their opinion on the matter (i.e., environmental impact assessments or social impact assessments), especially when concerning indigenous peoples in respect of the ILO 169 Convention on Indigenous and Tribal Peoples and the right to a free, previous and informed consent (FPIC), which must be conducted in good faith and sufficiently. Projects or activities that must comply in their approval process with public consultation stages face complex difficulties when this stage is not properly followed and attended. On 5 September 2018, the Supreme Court ruled against a mine tailings dam project authorised by SEMARNAT because the proper consultation process was not followed, and an indigenous community adjacent to the area where the project was to be developed filed an *amparo* action following the violation to their FPIC. Consequently, the project is currently suspended until the public consultation process is duly followed and attended.

In addition, non-government organisations have always played a strong role in influencing environmental policy and legislation as they collaborate, either formally or informally, with our legislative powers (both federal and local) to prepare and push for initiatives to be approved and enforced. Their influence has arguably increased recently owing to social media platforms.

### **V REPORTING AND DISCLOSURE**

Holders of environmental permits or authorisations are required to file reports before either federal or local environmental authorities on a regular basis with the purpose of proving the fulfilment of the conditions set forth in such permits and authorisations. At the federal level, this report is filed through federal annual operating reports, and at the local level, similar reports have been implemented.

Technical evidence supporting the information included in the report must also be filed before the authority for its review (i.e., wastewater or atmospheric emission tests that are carried out to determine if these emissions are within the maximum permissible levels of

pollutants set out in the applicable Mexican Official Standards). When the technical evidence shows that the maximum permissible levels of pollutants have been exceeded, then they can be used by the authorities as a basis to initiate an administrative law procedure against the holder and impose a penalty for the violation.

Pursuant to the regulation ruling the transfer of polluted land, the party who transfers the ownership of a polluted land is required to disclose to the prospective purchaser the information concerning the environmental conditions of the land to be transferred. The statement of the landlord on the environmental conditions of the land must be incorporated in the agreement by means of which the ownership is transferred. Prior to transferring the ownership of polluted land, both parties are compelled to obtain a polluted site transfer authorisation from SEMARNAT.

Likewise, the generator of or person responsible for handling hazardous waste or materials are obliged to notify PROFEPA on the releases, infiltrations, discharges or leaks of any of these materials or waste that occurred by fortuitous events or *force majeure*, unless the affected surface is under 1 cubic metre. This notice must be given immediately after the event occurred and filed in writing no later than three business days from the day on which the event took place.

## VI ENVIRONMENTAL PROTECTION

The Mexican Environmental Legal Framework comprises a set of both federal and local dispositions ruling the permitting regime. Being that natural resources and environmental protection is the subject of concurrent jurisdiction, as set forth in Article 73 of the Mexican Political Constitution, the federation, states and municipalities are empowered to rule and issue legal dispositions on different topics of said subject. The LGEEPA sets forth the topics and boundaries of the scope of action that the federation, states and municipalities have. In addition, all of the regulations regarding environmental protection, regarding the hydrocarbons sector, have been covered exclusively by ASEA; therefore, specific permits for the development of activities in such sector must be handled and obtained from ASEA.

In this regard, the main topics for which specific permits are required are the following:

- a* environmental impact;
- b* environmental risk;
- c* air emissions;
- d* hazardous waste;
- e* special handling and solid waste;
- f* water; and
- g* wastewater discharge.

### ***Integrated permitting regime***

There is an integrated permitting regime at the federal level for sources under federal jurisdiction that covers air emissions, national water consumption and wastewater discharge into bodies of water under federal jurisdiction, as well as generation of hazardous waste. This integrated permitting regime is covered by the sole environmental licence, which is granted by SEMARNAT on a permanent basis unless there is a modification to increase production, extend the facilities or change the corporate name.

Nonetheless, the activities executed by sources under federal jurisdiction must present activity reports on an annual basis. These reports are known as annual operating reports (COAs).

### ***Separate permitting regime***

If an activity does not cover all of the above-mentioned topics, separate permits must be obtained to comply with the legislation:

- a* an environmental impact and risk authorisation;
- b* an accident prevention plan approval (for high-risk activities as set forth in the first and second lists of high-risk activities);
- c* registration as a hazardous waste generator;
- d* a hazardous waste-handling plan;
- e* a concession title to extract national waters; and
- f* a federal permit to discharge wastewater.

In addition, and as previously mentioned, states and municipalities have their own permitting regimes covering the subjects under their jurisdiction (i.e., local environmental impact and risk, special handling and solid waste, wastewater discharge into municipal drainage systems), except for those regarding environmental protection in the hydrocarbons sector, which is now being administered exclusively by the federal authorities (ASEA). Some states and municipalities do have integrated permitting regimes (i.e., Mexico City through the local sole environmental licence or the state of Mexico in several municipalities through the municipal environmental licence) while others grant separate permits for each subject.

### **i Air quality**

The Mexican environmental legal framework protects air quality from both fixed and mobile air emission sources. As set forth in Sections II and VI, both the federation and the states have power to regulate on the matter. The federation regulates the following activities and industrial sectors: hydrocarbons, chemical, painting and ink, metal, automotive, cellulous and paper, asbestos, glass, electric energy generation and hazardous waste treatment.

States are empowered to rule on fixed sources that are not part of the aforementioned sectors under federal jurisdiction as well as mobile sources located within their territories.

Fixed sources are compelled to secure the permits as follows.

Federal fixed sources must secure the federal sole environmental licence, which, as identified above (see Section VI), is granted by SEMARNAT on a permanent basis unless there is a modification to increase in production, facilities' extension or change in corporate name and is actually a comprehensive permit covering, in addition to air emissions control, topics such as environmental impact and risk, hazardous waste generation and national water extraction.

In addition, activities executed by sources under federal jurisdiction must present COAs annually.

Local fixed sources must secure local environmental licences that are commonly under a separate permitting regime and must be renewed on an annual basis. Since each state is autonomous, laws, permits and authorisations may vary from state to state.

At a local level, activity reports must also be submitted on an annual basis before the environmental agencies of the corresponding states.

Notwithstanding the foregoing, all fixed sources must comply with certain obligations, such as monitoring its air emissions and carrying out periodic analysis to confirm compliance with Mexican Official Standards that set forth the maximum permissible levels of pollutants that fixed sources are allowed to release.

Finally, and deriving from the United Nations Framework Convention on Climate Change, the Kyoto Protocol, the 2014 COP20 in Lima, Peru, and the 2015 COP 21 in Paris, in November and December 2015, the Mexican legal framework is also regulating said emissions by incorporating a national database of greenhouse gas emission sources, the National Emissions Registry, and by obliging said sources to present an annual report through the COA when generating greenhouse effect gases and compounds in amounts equal to or above 25,000 tons of carbon dioxide.

## **ii Water quality**

In accordance with Article 27 of the Constitution, bodies of water within the Mexican territory are national assets. In this regard, and as set forth in the National Waters Law, the primary regime for water consumption and water pollution, the following activities require authorisation from the National Water Commission:

- a* national water consumption (superficial and underground water);
- b* wastewater discharges into bodies of water under federal jurisdiction; and
- c* occupation of federal property.

To carry out said activities, concession titles must be obtained, which are granted to private entities and individuals interested in carrying out the activities enlisted above for periods commonly going from 10 to 30 years.

On 30 August 2017, SEMARNAT published the guidelines containing the general provisions and requirements to protect and preserve national waters and inherent public property during the exploration and extraction of hydrocarbons in non-conventional oilfields. These guidelines became effective on 31 August 2017. Such guidelines must be met and implemented by any individual or business entity engaged in the exploration and extraction of hydrocarbons in non-conventional oilfields, such as oil and gas in shales, compact rocks, methane hydrate, etc. These guidelines set forth further and additional requirements to those set out in the National Waters Law for granting such concessions and permits for other activities. For instance, individuals and business entities engaged in exploration and extraction of hydrocarbons in non-conventional oilfields must implement measures for environmental protection, including, among others, those that prevent: the infiltration of polluting substances in the underground and the aquifer by installing impermeable layers; and the drilling of wells for the hydrologic exploration and for the integration of local and regional monitoring networks, as well as for the determination of the base line of water, etc., in accordance with best international practices and the guidelines.

Once the holder of a concession title, there are certain obligations to be observed, as detailed.

### ***National water consumption***

Quarterly consumption reports must be prepared and filed before the National Water Commission.

Governmental fees for national water exploitation must be covered on a quarterly basis.

If the concessionaire does not extract the total volume of water granted under concession for a period of two consecutive years, a non-cancellation guarantee fee must be covered and an application for a cancellation interruption certificate must be filed before the National Water Commission to avoid said authority cancelling the unexploited volumes.

### ***Wastewater discharge permit***

To be granted a wastewater discharge permit it is necessary to comply with the Mexican Official Standards that set forth the maximum permissible levels of pollutants to be discharged into bodies of water under federal jurisdiction<sup>4</sup> or with the specific discharge conditions imposed in the permit. On 5 January 2018, SEMARNAT published a draft for an updated version of the Mexican Official Standard NOM-001-SEMARNAT-1996<sup>5</sup>. This new standard foresees new pollutants to be measured (*Escherichia coli* and faecal *Enterococci*) stricter maximum permissible levels of pollutants in wastewater being discharged and the proceeding to be followed to obtain the certificate of conformity with the standard. At the time of writing, this standard continues to be in the project stage.

Periodic analysis of the wastewater being discharged must be carried out and the wastewater must be treated prior to the discharge.

Government fees in the event of discharging wastewater with surplus pollutants must be covered and a COA must be filed on an annual basis.

With regard to water supply and sewerage and drainage services, permits and agreements must be obtained or entered into with the local authorities (either state or municipal organisms); however, obligations also arise as follows.

### ***Water supply***

The terms and conditions of the water supply agreement must be complied with and the government fees for the water supply service covered.

### ***Local wastewater discharge permit***

The Mexican Official Standards, which set forth the maximum permissible levels of pollutants to be discharged into sewerage and drainage systems,<sup>6</sup> or the specific discharge conditions imposed in the permit must be complied with.

Periodic analysis of the wastewater being discharged must be carried out and the wastewater must be treated prior to the discharge.

Government fees in the event of discharging wastewater with surplus pollutants must be covered.

## **iii Chemicals**

SEMARNAT published in 1996 the First and Second Listings of High-Risk Activities, which set forth those activities that are considered as high-risk activities because of the use of hazardous substances and materials in amounts exceeding the thresholds foreseen in said listings.

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<sup>4</sup> (NOM-001-SEMARNAT-1996).

<sup>5</sup> (PROY-NOM-001-SEMARNAT-2017).

<sup>6</sup> (NOM-002-SEMARNAT-1996).

Those wishing to engage in high-risk activities must secure various authorisations, approvals and insurances in order to comply with the applicable legislation and to work in preventing any potential hazard or damage to the environmental or to human health.

Those wishing to carry out high-risk activities must prepare, prior to starting operations, an environmental risk study and an accident prevention plan. Said plan must be submitted for SEMARNAT's review for it to determine if the actions foreseen within are sufficient to attend any accident, incident or contingency that may arise because of the handling of the hazardous substances and materials.

An environmental liability insurance policy must be hired to cover any accident, incident or contingency potentially arising from the daily activities and operations with hazardous substances and materials.

The aforementioned permits are independent from any other permit, licence, authorisation or record that the activity may require in regard to civil protection and safety in the workplace, which are subjects ruled on locally by the civil protection agencies and by the Ministry of Labour.

Finally, activities using hazardous materials and substances in amounts below the thresholds set forth in the First and Second Listings of High-Risk Activities will not be under federal jurisdiction, but nonetheless, they are regulated by state authorities and must secure the corresponding permits and authorisations from the environmental agencies on the jurisdiction where they are located.

#### **iv Solid and hazardous waste**

Waste generation is ruled, in accordance with the General Law for the Prevention and Comprehensive Management of Waste and its Regulation, by both SEMARNAT and local environmental agencies as follows.

Hazardous waste is a subject under federal jurisdiction and as such all generators of hazardous waste must:

- a* register as hazardous waste generators;
- b* obtain hazardous waste handling plan approval (if the entity or individual generates 10 or more tons of hazardous waste per year); and
- c* have an insurance policy (if the entity or individual generates 10 or more tons of hazardous waste per year).

The aforementioned records and approvals may be secured through the sole environmental licence (see Section VI) or individually.

In addition, obligations are triggered to:

- a* keep a generation logbook;
- b* hire the services of companies authorised by SEMARNAT to provide the services of recollection, transport and disposal of hazardous waste;
- c* keep a record of recollection, transport and disposal of hazardous waste provided by the hired providers of services; and
- d* file the COA on an annual basis (if the entity or individual generates 10 or more tons of hazardous waste per year).

Solid and special handling waste is regulated by local authorities and, therefore, the permitting regime may vary from state to state; however, the most common permits and obligations for solid and special handling waste generators are as follows.

### **Permits**

It is necessary to register as a solid and special waste generator and to have a solid and special waste handling plan (when generating 10 or more tons of waste).

Obligations for permit holders are to:

- a* keep a generation logbook;
- b* hire the services of companies authorised by local environmental agencies to provide the services of recollection, transport and disposal of waste;
- c* keep a record of collection, transport and disposal of waste provided by the hired providers of services; and
- d* file on an annual basis the local annual operating report (if the entity or individual generates 10 or more tons of waste per year).

### **v Contaminated land**

The subject of contaminated land with hazardous waste or materials is under the jurisdiction of SEMARNAT, the agency responsible for granting the authorisations required to clean up contaminated land, which works jointly with PROFEPA as the agency in charge of enforcing the provisions set forth either in the applicable legal provisions or in the authorisations themselves.

As a general rule, the party causing the pollution of land is responsible for implementing the necessary actions for its remediation; however, the fulfilment of these obligations can also be claimed from the owner or tenant of the polluted land, since they are jointly and severally liable for the fulfilment of this obligation by provision of law. When the pollution is not caused by the owner or tenant, they have grounds to claim from the polluter the reimbursement of the costs and expenses associated with the remediation actions; however, they cannot cast off from any responsibility before the authorities.

The party responsible for carrying out the remediation actions is obliged to file before SEMARNAT a remediation plan proposal for its review and approval. Once the plan is approved, the responsible party is authorised to implement it through a service provider duly approved by SEMARNAT. The execution of the remediation plan is supervised by PROFEPA.

To minimise the risk of acquiring the liability of remediating a polluted land by a third party, it is always advisable to conduct Phase I and II environmental site assessments, the later only if required, as part of the due diligence process for real estate transactions, complemented with strict environmental clauses in the corresponding agreements.

The reparation or compensation of the damage caused to the environment or any of its elements (i.e., atmosphere, water, soil, biodiversity, etc.) can be claimed under the provisions set forth by the Federal Law of Environmental Liability independently of any other liabilities that may arise.

The action ruled by the Federal Law of Environmental Liability can be filed before a judicial court by PROFEPA, the local environmental protection agencies, individuals who live in the community within or adjacent to the area where the damage occurred and Mexican NGOs focused on the protection of the environment, only when representing a member of the affected community.

Because of this action, the person responsible for causing the damage could be sentenced by the court, first and foremost, to repair the damage. Only when the damage cannot be

repaired, either totally or partially, must the responsible person compensate it, totally or partially. In addition, when the damage derives from a wrongful wilful conduct, the court can impose an economic sanction that can add up to approximately US\$2.4 million.

## VII CLIMATE CHANGE

On 10 October 2012, the Climate Change General Law entered into effect, which broadly rules the mitigation and adaptation measures for climate change, creates the National Emission Registry, and promotes the transition towards a competitive, sustainable and low-emission economy.

Most of the provisions set forth by the law do not foresee obligations to be observed by private parties but rather goals to be achieved by the governmental agencies.

The only obligation that private parties must comply with is related to providing information to the National Emission Registry (RENE), in which the greenhouse gas emissions produced by certain fixed sources must be recorded when they are equivalent to 25,000 tons of carbon dioxide per year. The list of fixed sources of pollution that falls into the scope of the Climate Change General Law (LGCC) is contemplated by its regulations and they belong to the energy, industrial, transportation, agriculture, waste, trade and services sectors. The greenhouse gas emissions that must be recorded are, among others, carbon dioxide, methane, nitrous oxide, black carbon, fluorinated gases, sulphur hexafluoride, nitrogen trifluoride, halogen ethers, halocarbons, any mix of the before mentioned gases as well as other gases identified by the Intergovernmental Panel on Climate Change. This report must be filed through the federal annual operation report.

Since 2015, all fixed sources generating 25,000 tons or a higher amount of carbon dioxide per year are obliged to submit an emission report through the COA annually; in addition, every three years they are obliged to submit an expert opinion prepared by a verification unit authorised by SEMARNAT, and law enforcement has been incremental. Until now, industries subject to registration needed only to self-determine their greenhouse gases and compounds emissions and report them to the RENE. However, for 2018 and 2019, most establishments subject to reporting will be required, additionally, to have a verification report issued by a verification agency approved by PROFEPA. The LGCC contemplates economic sanctions of up to US\$15,402 for all establishments that do not present said report to the RENE, and a fine of up to US\$51,340 for the establishments that report wrongful information.

On 13 July 2018, certain reforms and additions to various dispositions of the General Law on Climate Change were published and, on 14 July 2018, entered into force. The objectives of this reform were to:

- a* establish an emissions commerce system to be implemented progressively and gradually, to promote the reduction of the emissions generated by Mexico with the least possible costs while in a measurable, reportable and verifiable manner;
- b* carry out the adjustments or modifications to the sceneries, trajectories, actions or goals committed to in the National Strategy on Climate Change;
- c* set forth the reduction goals assumed as national determined contributions (NDCs) committed by Mexico during the UNFCCC Conference of the Parties on its 21st session. As per the committed NDCs, Mexico shall reduce, for 2030 and in a non-conditional way, its greenhouse gas emissions in a 22 per cent and its black carbon emissions in a 51 per cent with regard to the baseline. This commitment will imply a



40 per cent reduction in the intensity of emissions per GDP unit between 2013 and 2030. The 22 per cent reduction on greenhouse gas emissions translates itself in a reduction, per participating sector, of 18 per cent for transport, 31 per cent for electric generation, 18 per cent for residential and commercial, 14 per cent for petroleum and gas, 5 per cent for industry, 8 per cent for agriculture and farming, and 28 per cent for waste; and

- d* set the basis for the elaboration of the National Adaption Policy within the frame of the National System for Climate Change and an Early Warning System.

Further, on 6 November 2018, ASEA published in the Federal Official Gazette general administrative dispositions establishing the Guidelines for the Prevention and Comprehensive Management of Methane Emissions in the Hydrocarbon Sector, which entered into force on 7 November 2018. The Guideline's purpose is to set forth the actions and mechanisms that the parties executing activities of the hydrocarbon sector shall adopt to prevent and control the methane emissions generated in their facilities. The obligations for these parties, among others, are to identify the sources and potential sources of methane emissions within their facilities and prepare a methane diagnosis for report and prepare a Programme for the Prevention and Comprehensive Management of Methane Emissions within the Hydrocarbon Sector.

## VIII REGULATIONS FOR THE HYDROCARBONS SECTOR

As already stated, ASEA was created to issue the required regulations and norms to provide the technical elements for industrial, operative security, and the protection of the environment, as well as to verify, supervise and enforce the law for the development of hydrocarbons activities. The following regulations and norms were recently issued by ASEA:

- a* An executive agreement regarding the content of the regulations, Mexican Official Standards and other dispositions for air emission, discharges, use of natural resources and, in general, all the relevant environmental impacts that may occur as a result of facilities and activities performed in an liquefied petroleum gas service station, to be presented in a preliminary report with regard to the Environmental Impact Evaluation (Service Stations).
- b* General executive rules that establish guidelines for:
  - the development, implementation and authorisation of administration systems of industrial, operative and environmental security and protection, applicable to certain hydrocarbons sector activities;
  - the minimum requirements of insurances that the regulated parties require for the development of works and activities of exploration and extraction of hydrocarbons, as well as the treatment and refining of petroleum and natural gas processing;
  - the authorisation, approval and evaluation of the performance of third parties regarding industrial and operative security and environmental protection in the hydrocarbons sector;
  - informing ASEA about incidents and accidents (first format, event control information, monthly consolidation information, immediate notice, formalisation of the notice);

- the regulated parties that develop investigations on the causes of incidents and accidents that occurred in their facilities;
- industrial and operative security and the environmental protection in the activities of recognition and superficial exploration, exploration and hydrocarbons extraction;
- external audits of the operation and development of administration systems of industrial, operative and environmental security and protection;
- industrial and operative security and environmental protection in the activities of exploration and hydrocarbons extraction in non-conventional deposits in land, land transport by means of pipelines of petroleum, petroleum products and petrochemicals;
- the conformation, implementation and authorisation of administration systems of industrial, operative and environmental security and protection, applicable to the activities of public sale of natural gas, distribution and public sale of LPG and petroleum products;
- the prevention and comprehensive control of methane emissions in the hydrocarbon sector for the latter to achieve the goals and implement the necessary actions to reduce methane emissions; and
- the comprehensive management of special handling waste generated within the hydrocarbon sector, which contemplates the complete chain of management (generation, collection, transport and disposal).

c Mexican Official Standards for:

- NOM-EM-001-2015 (construction, maintenance and operation of service stations using diesel and gasoline associated with auto consumption);
- NOM-004-ASEA-2017 (gasoline gas recovery system for the control of emissions of service stations for the public sale of gasoline-test methods for the determination of efficiency, maintenance and operation parameters);
- NOM-005-ASEA-2016 (design, construction, operation and maintenance of the service stations for the storage and sale of diesel and gasoline);
- NOM-EM-005-ASEA-2017 (establishing the criteria to classify the special management waste of the hydrocarbons sector activities, and determines which ones require a handling plan);
- NOM-006-ASEA-2017 (technical specifications and criteria for operative security and environmental protection for the design, construction, prestart, operation, maintenance, closing and dismantling of land facilities for the storage of petroleum products and petroleum, except for LPG);
- NOM-007-ASEA-2016 (natural gas, ethane and mineral carbon associated gas transportation by pipelines);
- NOM-EM-002-ASEA-2016 (establishing the test methods and operation parameters, maintenance and efficiency of gasoline gas recovery in service stations for the public sales of gasoline, for emissions control);
- NOM-EM-003-ASEA-2016 (specifications and technical criteria for industrial and operative security, and environmental protection for the design, construction, prestart, start and maintenance of the land storage facilities of petroleum products, except for LPG);

- NOM-EM-004-ASEA-2017 (specifications and requirements of the service stations for the public sale of LPG by partial fulfilment and portable pressurised containers);
- NOM-003-ASEA-2016 (distribution by pipelines of natural gas and LPG);
- NOM-010-ASEA-2016 (natural compressed gas, minimum requirements for security of the charging terminals and discharge terminals of portable storage modules and supply stations for automobiles); and
- NOM-006-ASEA-2016 (on the design, construction, operation and maintenance of service stations for storage and public sale of diesel and gasoline).

*d* Also, ASEA has issued Projects of Mexican Official Standards that will probably be valid soon:

- PROY-NOM-001-ASEA-2018 (criteria to classify special handling waste from the hydrocarbon sector, determine which are subject to a handling plan as well as the elements to prepare and manage said handling plans applicable to both hazardous and special handling waste); and
- PROY-NOM-009-ASEA-2017 (administration of the integrity of pipelines for the recovery, transport and distribution of hydrocarbons, petroleum products and petrochemicals).

## **IX OUTLOOK AND CONCLUSIONS**

The Mexican environmental legal framework is vast and complex, but it does provide comprehensive legal provisions for each of the most common means of pollution. Indeed, legislation can always be improved and is subject to constant changes and modifications as society demands them.

Perhaps the most important challenge for Mexico is that, owing to the Energy Reform, new companies and investors are emerging to carry out activities that were solely executed by the Mexican government. This implies that the Mexican government, through the environmental agencies, must work on the enforcement of the legal framework in an even more efficient manner. Further, as per Mexico's commitments through NDCs, and greenhouse gases and compounds emissions, efficiency and effectiveness is even more relevant.

# NETHERLANDS

*Jochem Spaans, Seppe Stax, Rob van der Hulle and Marjet van Bezooijen<sup>1</sup>*

## I INTRODUCTION

This is an overview of Dutch environmental law, including climate change legislation, highlights, trends and recent developments that are of importance when doing business in the Netherlands. The focus is on environmental laws applicable to operating industrial sites (facilities), but Dutch environmental legislation covers a much broader range of activities and products. This chapter, therefore, is an introduction only, and is limited to the European part of the Kingdom of the Netherlands (historically, certain island territories in the Caribbean form part of the Netherlands).

The Netherlands is a small, densely populated country and a Member State of the European Union. It is home to one of the largest port and petrochemical areas in Europe, and is one of the world's largest exporters of food and agricultural products. The Netherlands has a flat geography, a significant part of which is below sea level, and hosts a relatively large number of wetlands.

The Netherlands has a well-established system of environmental laws that is often perceived as detailed and complex. Further, the Netherlands has a well-established system of inspections and enforcement, as is discussed in greater detail below.

The Dutch government has a tradition of being a frontrunner in respect of environmental protection within the European Union. In implementing EU laws, the Dutch legislator often used to go beyond the level of protection agreed on a communal level. Recently, however, the Dutch legislator seems more keen on directly transposing EU requirements without introducing additional national requirements. Nonetheless, the Dutch government still has high policy ambitions in respect of various environmental topics, including climate change, the circular economy and promoting sustainability, including wind power.

Next to the various legal instruments available, increasingly, the Dutch government enters into agreements known as 'green deals' with other authorities, non-government organisations and companies. The aim is to promote and accelerate sustainable innovation in the areas of energy, bio-based economy, mobility, water, food, biodiversity, resources, construction and climate. The green deal defines the initiative and the required action from each of the participants as clearly as possible, if possible in quantitative output objectives. To date, about 225 green deals have been closed, involving over 1,000 participants.

The scope and complexity of current environmental laws have triggered what is the largest system reform of Dutch environmental laws to date. This legislative project is ongoing,

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and aims for a full integration of virtually all environmental acts, including legislation on zoning and planning, and on nature protection, into a single Environment and Planning Act. Although the Act has been adopted by the Dutch parliament, the entire system reform is not expected to be completed before 2021 (the anticipated date of entry into force of the Act currently being 1 January 2021). The future Environment and Planning Act will have a significant impact on the environmental laws that apply to industrial facilities.

## II LEGISLATIVE FRAMEWORK

The primary source of environmental law is the Dutch Environmental Management Act (EMA). The EMA contains an extensive set of rules with regard to various environmental topics, such as waste management, environmental impact assessment, greenhouse gas emission allowance trading, noise ceilings, air quality standards, etc. The EMA also serves as the legal framework for setting more detailed rules by order in council and ministerial decree, and numerous of such orders and decrees have been adopted under the EMA over time. In addition, the EMA describes the roles of municipal, provincial and national authorities in respect of environmental management.

Under the EMA, general environmental rules for facilities have been set in the Dutch Decree containing general rules for the regulation of facilities in the interest of protecting the environment (the Activities Decree). All facilities in the Netherlands (e.g., factories and offices buildings) are subject to the Activities Decree, which covers basically any environmental topic (noise, air emissions, soil, etc.). *Inter alia*, the Activities Decree prescribes that a zero base soil survey is conducted before starting operations (and requires that the soil is brought back to these conditions if the facility is shut down). Further general rules include air emission limit values and maximum noise and odour limits, as well as mandatory energy saving measures. Discretionary powers may exist under the Decree for the competent authority to deviate from the general rules by means of ‘customised environmental requirements’ that apply to a specific facility, taking into account the specific circumstances of the case at hand. The general rules set by the Activities Decree have been supplemented by detailed and technical rules set by the Activities Regulation, *inter alia*, on monitoring requirements.

In addition to the general rules that apply under the Activities Decree, designated facilities – referred to in the Netherlands as ‘Type C’-facilities – also require an environmental operating permit. These include facilities under the scope of the EU Integrated Pollution Prevention and Control (IPPC) regime (EU Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control (IPPC facilities)) and other facilities that are deemed to have a significant impact on the environment and have been designated as such. Permit conditions attached to environmental operating permits must be based upon the best available techniques, as detailed in reference documents. These include reference documents available on an EU level, commonly referred to as ‘best available technique reference documents’. The issuance of permits, including procedural rules, legal redress and enforcement action, is governed by the Act containing general provisions on environmental permitting (WABO). Supplemental – mostly procedural – requirements apply under the General Administrative Law Act.

The WABO forms the legal basis for also permitting various other activities (than operating a facility), such as building activities, deviating from a municipal zoning plan, activities that involve designated monuments, etc. Typically, an environmental operating permit will include various other activities as well, and is therefore referred to as an ‘integrated

permit'. Certain designated activities in facilities – *inter alia*, various specific waste handling activities – require a limited environmental permit under the WABO. Such a limited environmental permit does not contain permit conditions, but merely 'approves' the activity requested as such.

Various other environmental laws apply in the Netherlands, such as the Nature Protection Act that provides the legal regime for protecting flora and fauna, Natura 2000 areas and the Dutch forests. This Act is discussed in greater detail below. Other acts include, for instance, the Soil Protection Act (SPA), discussed in greater detail below, and the Water Act. The latter Act provides for a dedicated permitting regime for, *inter alia*, activities that may adversely impact the surface water quality (e.g., discharges of wastewater) or groundwater (e.g., groundwater extraction), and activities within water works (e.g., the construction and operation of an offshore wind farm). The Dutch Building Decree, the Asbestos Removal Decree and the Labour Conditions Decree contain rules on the management, maximum exposure to, and (sometimes mandatory) removal of asbestos.

In addition to the various acts, decrees and regulations, a body of guidelines, advice and other guidance documents exists, that is often prepared in consultation with business representatives and that covers a broad range of technical environmental topics. In some cases, the law explicitly refers to such documents and requires that their content is adhered to. In other cases, such documents are considered under case law to represent the latest technical insights, implying that the authority may rely on its content, for instance in issuing a permit. An important example forms the Publication Series on Dangerous Substances (PGS). The PGS requirements are especially important for companies that store gases and liquids, many of which are located at the large industrial port of Rotterdam. The Activities Decree refers to the PGS. The PGS is updated from time to time as technology progresses.

### III THE REGULATORS

Who the regulator is in respect of environmental matters depends on the matter involved. In respect of facilities, in principle, the municipality in which a facility is located is the authority empowered to issue permits or take enforcement action. In some cases, this power resides with the province instead. This, more specifically, concerns facilities that are in scope of the Dutch Risks of Major Accidents Decree 2015 and designated IPPC facilities. Under very specific circumstances, the Minister for Infrastructure and Water Management (the Minister) is the competent authority.

In other matters, who the regulator is may vary. For instance, in matters concerning nature protection, powers in principle reside with the province, while in product stewardship matters powers often reside at a national level.

Day-to-day handling of environmental matters on a municipal and provincial level takes place by regional environmental bodies, acting on behalf of the authority. These government bodies consist of environmental experts who issue permits, carry out inspections and take enforcement action on behalf of multiple municipal and provincial authorities. Only a number of dedicated regional environmental bodies deals with (external) safety issues. In 2016, legislation was adopted aimed at enhancing the quality of permit issuance, inspections and enforcement action, *inter alia*, requiring all authorities involved, including criminal authorities, to share information with each other.

At the national level, inspections and enforcement are carried out by the Human Environment and Transport Inspectorate (ILT), acting on behalf of the Minister or State Secretary for Infrastructure and Water Management. Other national inspectorate bodies and departments may be involved as well.

A violation of environmental law may also be considered a criminal offence and may therefore be investigated by the police and criminally prosecuted by the Public Prosecutor, which is discussed below.

## IV ENFORCEMENT

Under Dutch environmental law, scope for enforcement, including in respect of general rules and permit conditions, exists under both administrative and criminal law. In addition, anyone incurring damages as a result of the infringement may seek an injunction or compensation of damages under civil law.

### i Administrative law enforcement

Enforcement under administrative law is primarily aimed at undoing the violation and preventing new violations from occurring, while criminal proceedings are aimed at imposing a punitive sanction. The most common administrative law sanctions are an order under administrative coercion and an order under penalty payment. In the case of an order under administrative coercion, the government will remedy the violation at the expense of the violator, often after expiry of a mandatory grace period. In the case of an order under penalty payment, a penalty is forfeited for the duration that the violation continues to exist after the grace period. No maximum amount applies in respect of the order under penalty payment, but the penalty must be proportionate, yet effective. Further administrative sanctions include withdrawal of the environmental operating permit, which is usually seen as a last resort measure, while in designated cases an administrative fine may be imposed (e.g., for certain violations in respect of the Emissions Trading Scheme). A recent trend under environmental law is the broader introduction of such administrative fines. For instance, the Nature Protection Act allows for imposing administrative fines in respect of certain violations. It is anticipated that under the future Environment and Planning Act, administrative fines will become a common sanction in environmental law.

The authorities may take enforcement action *ex officio*, or upon request by a third party, including a competitor. Violations must in principle be enforced. Exceptions may include that legalisation is imminent (e.g., the authority is about to issue a permit that takes away the violation), or if enforcement action is deemed disproportionate, which is rarely the case). Also, immediate enforcement action may not be taken where the authority's own, reasonable policy dictates otherwise, for instance stipulating that a warning letter is sent first. Dutch authorities often send warning letters, and in most cases a draft version of the sanction decision must be sent first, allowing the addressee to submit its views on the intended sanction.

If a violation is tolerated, this should in principle take the form of a formal decision to tolerate, imposing a deadline and conditions that mitigate the impact of the violation. In practice, however, occasionally no enforcement action will be taken without a formal decision to tolerate. A general trend is, however, that authorities are more stringent when it comes to inspections and taking enforcement action. In this respect, almost all authorities have adopted a nationwide enforcement strategy, which provides for a uniform approach to environmental violations.

The Netherlands has implemented the principles of the Environmental Liability Directive (2004/35/EC, as amended; ELD). Operators carrying out dangerous activities listed in Annex III of the ELD can be held strictly liable under administrative law for violations of environmental legislation, including permit requirements, and can be forced to remedy or compensate environmental damages caused by the violation.

## **ii Criminal law enforcement**

The Public Prosecutor's Office is charged with enforcement pursuant to criminal law. Both legal entities and natural persons may be prosecuted for criminal offences. A legal entity can be held criminally liable for any criminal act that can be attributed to it. Whether an offence can be attributed to a legal entity will depend on the specific circumstances, including on whether the offence is within the normal activities of the legal entity and whether the legal entity exercised control over the offence. Officers of the company can also be held criminally liable when they have given factual directions regarding the event. Examples would include if the individual did not take measures to prevent the offence, even though he or she had the authority and reasonable duty to do so. In a decision of April 2016, the Supreme Court reconfirmed and clarified the position regarding criminal liability of the individual who has given factual directions regarding the offence.<sup>2</sup>

Most violations of specific environmental laws and regulations have been designated as criminal offences. The Dutch Penal Code also provides for a number of general environmental offences, including a prohibition on bringing a hazardous substance in the soil, air or surface water, and a duty for operators of industrial plants to take reasonable measures to prevent or limit danger to health or the environment when producing or making available substances, preparations or GMOs.

For most offences, Dutch law makes a distinction between acting 'at fault', or with 'intent', which, if proven, results in more severe punishment. Fault is the lightest form of culpability under Dutch law: the mere fact that culpability can be established (e.g., recklessness, knowledge, neglect) suffices. Intent can also be presumed to be present if a defendant knowingly and willingly accepted the considerable chance that harm would occur. If safety measures are not complied with, this can also lead to the establishment of 'intent'.

In addition to the above, for less severe violations of environmental law an 'on-the-spot' criminal fine may be imposed by government decision, instead of court ruling. These fines are relatively limited, and legal redress is available.

## **iii Civil law enforcement**

Civil law is rarely applied to achieve enforcement objectives, though the authorities may also file civil law claims against polluters if no administrative law instruments are available. Anyone incurring damages as a result of a violation of a statutory duty, a property right, or an unwritten duty of proper social conduct that can also be regarded as a fault, can seek an injunction or compensation of damages under civil law from the perpetrator. A related application of civil law to force government to take action to achieve policy objectives is the *Urgenda* litigation, referred to in Section VII. Meanwhile, the Netherlands has also been held liable for a failure to achieve air quality standards (see Section VI.i).

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2 Supreme Court 26 April 2016, ECLI:NL:HR:20163:733.



## V REPORTING AND DISCLOSURE

Typically, permit conditions will require the permit holder to report the facility's emissions to the competent authorities on a frequent basis (monthly, quarterly, etc.). Similar reporting requirements apply under the Activities Decree in respect of the general rules set. Also, companies participating in the EU Emissions Trading System (ETS) must report on their emissions annually, in the form of a verified emissions report. Whereas such reporting requirements concern the normal business operations, additional requirements apply to specific events, the main requirements of which are the following:

- a* Under the EMA, unforeseen incidents that occur within a facility and that have, or threaten to have, a negative impact on the environment, must immediately be reported to the authorities. An unforeseen incident is any event that deviates from normal business operations and includes calamities and accidents as well as failures in the production process. Over and above the reporting requirement, additional requirements apply to the operator aimed at preventing, limiting or undoing a negative impact onto the environment.
- b* For IPPC facilities, the EMA imposes a similar reporting requirement in the case of any non-compliance with permit conditions and general rules, other than that which is caused by an unforeseen incident.
- c* In addition, under the SPA, anyone conducting or involved in activities that cause soil contamination must immediately report the contamination to the authorities. As discussed in Section VI.vi, in such case a duty of care applies, requiring the polluter to prevent, limit and undo the contamination as much as possible.
- d* Additional reporting regimes are in place in respect of specific activities. For instance, a reporting requirement similar to the requirement under the SPA applies under the Water Act in respect of activities that pollute river banks. Also, a reporting requirement applies under the Act on transport of dangerous substances in the case of accidents or other incidents that may pose a risk to public safety. Further, self-reporting obligations have been imposed by EU product stewardship legislation, such as the Dutch implementing laws for the European Union's Restriction of Hazardous Substances Directive 2011/65/EU, require the manufacturer to inform the authority when he or she has reason to believe that his or her product does not comply and poses a risk.

There is no specific rule on disclosure of environmental information in transactions. Under the Dutch Civil Code, however, the seller must disclose information, including information that the seller should know may be relevant for the buyer, while the buyer is under obligation to make its own due investigations. Although this depends on the merits of the case (including on the professionalism of the parties involved and what information is available in the public domain already, such as soil contamination registered in the Land Register), typically the seller's disclosure requirement will prevail over the buyer's duty to investigate. The seller is thus likely to be liable for failure to disclose information that was not self-evident. In transactions, it is common for the buyer to require warranties and indemnities for environmental matters from the seller. Usually, this is in itself a driver for the seller to disclose information.

As per 1 July 2016, an Act is in place aimed at protecting whistle-blowers, including in respect of environmental matters. The Act requires employers that employ at least 50 people, to set up internal procedures for the handling of internal abuse notifications. Labour laws protect the position of whistle-blowers, while a dedicated government agency has been set up providing general information as well as advice in actual whistle-blowing cases.

## VI ENVIRONMENTAL PROTECTION

### i Air quality

Air quality standards are primarily laid down in and on the basis of the EMA. These standards and requirements should be taken into account, *inter alia*, when determining whether an environmental permit for a facility may be granted. If an application for such permit has been submitted, the application should also include an assessment on whether the activities conducted within a facility do not lead to the exceeding of the applicable quality standards. Air emission standards and related requirements have been set in the Dutch Activities Decree, for instance with respect to combustion plants. The various standards and requirements, *inter alia*, concern NO<sub>x</sub>, SO<sub>x</sub>, and particle pollution, but also substances of very high concern.

The air quality standards referred to above also aim to implement the air quality standards set at the European level in Directive 2008/50/EC on ambient air quality and cleaner air for Europe. It has been established that those standards are not being complied with at all locations in the Netherlands. Initially, the District Court in The Hague therefore ordered the Dutch state in injunction proceedings to adopt air quality plans, containing additional measures to comply with the air standards at all locations as soon as possible. This ruling seemed to be in line with previous case law of the European Court of Justice (ECJ).<sup>3</sup> The District Court also ordered the state to refrain from taking measures in the meantime that could negatively affect the possibility to comply with the air quality standards as soon as possible.<sup>4</sup>

However, this ruling has been overruled by the District Court in The Hague in the main proceedings. By a judgment of 27 December 2017, the District Court ruled that the state has discretion in deciding which measures to adopt to ensure compliance with the air quality standards at all locations as soon as possible. According to the District Court, there is no reason to assume that the air quality plans in place do not provide for adequate measures.<sup>5</sup> Higher appeal is pending.

In future, the above-discussed rules will be included in the new Environment and Planning Act.

### ii Water quality

The water quality regime in the Netherlands is primarily laid down in the Water Act. This Act requires the Minister, in consultation with the Minister of Economic Affairs, to adopt a National Water Plan, as well as the provincial council of each province in the Netherlands to adopt regional water plans. The current National Water Plan is valid until 2021 and contains the principles and the framework of the national water policy. The National Water Plan refers to the EU Water Framework Directive 2000/60/EC (WFD) and aims to further improve the water quality in line with the WFD. Further to the obligation to adopt a National Water Plan and regional water plans, the Water Act prohibits the discharge of waste water or contaminating or hazardous substances in surface waters, except when the discharge of these substances is allowed for under a water permit or the general rules laid down in the Water Decree.

<sup>3</sup> European Court of Justice 19 November 2014, ECLI:EU:C:2014:2382.

<sup>4</sup> District Court of The Hague 7 September 2017, ECLI:NL:RBDHA:2017:10171.

<sup>5</sup> District Court of The Hague 27 December 2017, ECLI:NL:RBDHA:2017:15380.

The water quality standards mentioned in the WFD have been implemented in the Dutch Decree on quality requirements and monitoring for water 2009.

In future, the rules discussed above will be included in the new Environment and Planning Act.

### iii Chemicals

Similar standards for the manufacturing, supply and safe use of chemicals apply across the entire European Economic Area, which includes EU Member States, Iceland, Liechtenstein and Norway. In the Netherlands, as in any EU Member State, Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) has direct application. The aims of REACH include the protection of human health and the environment from the risks that can be posed by chemicals.

REACH establishes procedures for collecting and assessing information on the properties and hazards of substances. Companies need to register their substances and to do this they need to work together with other companies who register the same substance. The European Chemicals Agency, the central regulatory authority in the implementation of REACH, receives and evaluates individual registrations for their compliance.

To allow companies and authorities to manage the workload related to registering chemicals, REACH introduced a staggered system for substances that were already on the European market in 2007 and that were pre-registered by 1 December 2008 (or in certain circumstances, a later pre-registration date) in accordance with REACH (phase-in substances). The most hazardous substances and those manufactured or imported in the largest quantities were to be registered first, in 2010, followed by the registration of chemicals in 2013 that were manufactured or imported at 100–1,000 tonnes a year. Finally, the chemicals manufactured or imported between 1–100 tonnes per year per company had to be registered last, before 31 May 2018.

Substances that do not fulfil the criteria for phase-in substances must be registered before they can be manufactured or imported in the European Union.

The EU Member States evaluate selected substances and examine the quality of the registration dossiers and the testing proposals to clarify initial concerns for human health or for the environment. Authorities can ban hazardous substances if their risks are unmanageable. They can also decide to restrict a use or make it subject to a prior authorisation.

REACH impacts on a wide range of companies across many sectors, including manufacturers and importers into the European Union. To a limited extent, downstream users may also have some responsibilities under REACH. The specific obligations that companies have depend on the type of products involved (i.e., substances on their own, including metals, mixtures or articles).

In the Netherlands, Bureau REACH performs most tasks pursuant to REACH, including the management of the REACH help desk.<sup>6</sup> Enforcement is the responsibility of a cooperation of the Labour Inspectorate, the Food and Goods Authority and the ILT.

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<sup>6</sup> [www.chemischestoffengoedgeregeld.nl/](http://www.chemischestoffengoedgeregeld.nl/).

Other EU regulations on chemicals, such as the Biocidal Products Regulation (Regulation (EU) 528/2012), the Classification, Labelling and Packaging Regulation (CLP Regulation (EC) No. 1272/2008) and the Prior Informed Consent Regulation (PIC Regulation (EU) 649/2012), directly apply in the Netherlands as well.

As said above, the national PGS sets detailed guidelines on the handling and storage of hazardous substances. These guidelines apply to nearly all industrial facilities, through a reference in the Activities Decree, or in the environmental operating permit.

#### **iv Solid and hazardous waste**

Waste storage, transportation and disposal are controlled by a variety of legislation, both at a national and a regional level. Increasingly, there has been a legal emphasis on waste prevention and minimisation.

The EMA is the main Act setting out the obligations in respect of waste management and transportation. It defines the roles of parties involved in the waste processing chain such as the ‘disposer’, ‘transporter’ and ‘collector’ of waste, each having specific rights and obligations. For example, business waste may only be transferred to a permitted waste collector or certified transporter. In addition, the EMA has set a national landfill ban (i.e., landfilling may only occur at designated areas). Furthermore, on the basis of the EMA, a National Waste Management Plan must be drawn up setting out the national waste management policy for the years to come.

Similar to REACH, the EU Waste Transportation Regulation (EC) 1013/2006 applies in the Netherlands (and other EU Member States), setting out the legal requirements for transportation of waste from and to the Netherlands (e.g., transport of dangerous waste needs to be notified).

In future, the above-discussed (national) rules will be included in the new Environment and Planning Act.

#### ***Circular economy***

The concept of a circular economy – where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised – has been embraced by the Dutch government. The Netherlands positions itself within the European Union as a circular hotspot, and various ‘green deals’ on circular initiatives have been agreed upon by (semi-) public institutions and commercial parties. Next to these market initiatives, in the summer of 2016, a national policy programme named ‘the Netherlands circular in 2050’ was presented to the Dutch parliament. Much of the policy initiatives concern waste management and the recovery of raw materials from waste, although the Dutch government is bound to the EU law concept of ‘waste’.

#### ***Shell case***

In respect of the latter, the judgment of the ECJ of 12 December 2013 in the *Shell* case (Cases C-241/12 and C-242/12) is worth mentioning here.<sup>7</sup> This case concerned ultralight sulphur diesel (ULSD) that was accidentally mixed with methyl tert-butyl ether (MTBE). Because the flashpoint of the mixture was too low for it to be resold as fuel for diesel engines, the mixture was off spec. The District Court in Rotterdam filed a request for a preliminary ruling

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7 European Court of Justice 12 December 2013, ECLI:EU:C:2013:821.

to the ECJ on the question of whether the mixture could be qualified as waste. Under the EU Waste Framework Directive 2008/98 any substance or object that the holder discards, or intends or is required to discard can be considered as waste. The ECJ ruled that the mixture of ULSD and MTBE did not qualify as waste. According to the ECJ, particular attention must be paid to whether the substance in question is of any use to its holder. If not, the substance constitutes a burden that he or she will seek to discard in a way that is likely to cause harm to the environment. In the present case, however, the mixture of ULSD and MTBE did not constitute a burden. On the contrary, the holder had sent back the mixture with the intention of getting a refund under the sales contract, while the recipient had taken back the mixture with the intention of blending it and placing it back on the market.

The judgment of the ECJ in the *Shell* case has not gone unnoticed by the Dutch Council of State, the highest administrative judge in the Netherlands. The key factor for the Council of State in determining whether an object or substance can be considered as waste now appears to be whether the object or substance in question constitutes a burden for the holder that he or she will seek to discard in a way that is likely to harm the environment. Based on that factor, the Council of State has ruled, for example, that electric devices returned by customers do not qualify as waste, even those that should be repaired first in order to be reused.<sup>8</sup> The Council of State reached the same conclusion in respect of flux-oil that still contained minor contaminations.<sup>9</sup>

## v Asbestos

The use of asbestos-containing materials has been prohibited in the Netherlands since July 1993. Notwithstanding this prohibition, there is no general legal requirement to remove asbestos already present in buildings, provided this presence does not impose health risks. Concentration limit values have been set to this end, and are used to determine whether remediation is required (usually in the case of friable asbestos, or in case of demolition and renovation activities). Good practice dictates that all asbestos on site should be identified, labelled and maintained in a good condition (i.e., not in a fibre releasing state), and management plans are adopted to this end. Having a building used while being aware of a dangerous situation concerning asbestos posing a health risk for the people in that building, may constitute a criminal offence.

It is anticipated that, as of 2025, asbestos-containing materials in rooftops will be prohibited. Owing to age, the surface of roofing materials containing asbestos is becoming brittle, slowly releasing asbestos fibres to the environment and therefore creating a health risk.

## vi Contaminated land

The most important requirements regarding prevention and remediation of contaminated soil and groundwater have been laid down in the SPA. The SPA distinguishes between 'historical' soil and groundwater contamination (caused before 1 January 1987) and 'new' soil and groundwater contamination (caused from 1 January 1987 onward). All new soil contamination must be prevented as far as possible, and in the event that new soil or groundwater contamination occurs nonetheless, all new contamination must in principle

8 Council of State 3 February 2016, ECLI:NL:RVS2016:192. However, this ruling did not prevent the Court of Appeal of The Hague to refer various questions for a preliminary ruling to the ECJ in a similar case; see Court of Appeal of The Hague, 22 September 2017, ECLI:GHDHA:2017:2815.

9 Council of State, 19 November 2014, ECLI:NL:RVS2014:4130.

be cleaned up. For historical soil contamination, remediation requirements only apply if the authorities deem the soil contamination to be 'severe' and a clean-up urgently required. Whether contamination must be deemed severe contamination is determined by a number of factors, including whether certain limit values (intervention values) are exceeded. The urgency of a clean-up depends on a risk assessment.

Anyone who intends to remediate or move contamination must notify the authorities. Remediation may, in principle, only be carried out in accordance with a remediation plan that has been approved by the authorities. The objective of the clean-up should be that the soil becomes suitable for the intended use. Upon completion of the clean-up, a final report must be issued to the authorities for approval. The authorities will determine whether the clean-up meets the conditions stated in the remediation plan. If the contamination has not been entirely removed, restrictions regarding the use of the soil and 'aftercare' requirements (e.g., monitoring of potential migration) may also be imposed. The authorities may also require remediation prior to redevelopment as a condition of planning permission. In theory, under the SPA, the polluter is primarily responsible for the contamination. However, in addition, the landowner or leaseholder can be held responsible by the authorities, regardless of whether he or she contributed to the contamination. The authorities have discretion in deciding whether to assign responsibility for remediation to either the polluter or the landowner, and in practice, the polluter plays a very limited role in the discussions.

The SPA does not deal with apportioning liability and recourse between the various civil parties that may be held responsible; that should be determined under rules of civil law. A party that is held responsible by the authorities for a remediation under the SPA, or otherwise incurs cost in relation to contamination he or she did not cause, may try to take recourse against the polluter on the basis of tort, or against the party from whom he or she acquired the site. In addition, an owner of a site from which contamination migrates to an adjacent site may be held liable by the owner of the adjacent site, regardless of whether the owner of the site caused the contamination.

In future, the rules regarding prevention and remediation of contaminated soil and groundwater will be included in the Environment and Planning Act (in the proposed bill for new soil protection legislation, the role of the polluter is even more limited). The focus on the landowner, which is already actual practice, will be formalised and the SPA itself will be withdrawn.

## **vii Nature protection**

On 1 January 2017, the Nature Protection Act entered into force. This Act provides the legal framework for, *inter alia*, the protection of protected flora and fauna and of habitats in designated Natura 2000 areas. Under the Nature Protection Act, the killing, disturbing and wounding of protected species is prohibited, unless an exemption has been obtained (or a general exemption applies). In addition, a permit is required for activities that may adversely affect a Natura 2000 area.

With respect to nitrogen deposition, reference must be made to the Integrated Approach to Nitrogen (PAS) that was introduced in the Netherlands in July 2015. The PAS provides for the allocation of 'nitrogen development space' to projects that negatively impact a designated Natura 2000 area by means of nitrogen depositions. The available nitrogen development space is, however, limited. A key assumption under the PAS is that nitrogen development

space is created by restoration measures for Natura 2000 areas and source-directed measures aimed at lowering NO<sub>x</sub> emissions, resulting in a general (autonomous) reduction of the nitrogen depositions onto such areas.

The PAS is currently the subject of legal proceedings. In 2017, the Council of State submitted various questions for a preliminary ruling to the ECJ, asking the ECJ whether the PAS violates the European Habitats or Birds Directives (EU Directives 92/43/EEC and 2009/147/EC).<sup>10</sup> The ECJ answered these questions in its judgment of 7 November 2018.<sup>11</sup> In short, the ECJ ruled that the European Habitats and Birds Directive do not preclude a programmatic approach, provided that a thorough and in-depth examination of the restoration measures and source-directed measures under the PAS makes it possible to ensure that there is no reasonable scientific doubt as to the absence of adverse effects of each plan or project on the integrity of the Natura 2000 areas concerned. Whether the PAS complies with this condition is to be determined by the Council of State. A final judgment of the Council of State is currently being awaited.

## **VII CLIMATE CHANGE**

In the Netherlands, several laws and other initiatives are in place aimed at reducing greenhouse gas emissions and improving energy efficiency. In September 2013, the Dutch government entered into a national Energy Agreement for Sustainable Growth with various stakeholders. The agreement outlines a long-term strategy for renewable growth in the Netherlands. Offshore wind power has been identified as one of the key technologies to achieving the renewable energy targets.

New global climate change ambitions have been set by the Paris Treaty of December 2015. In follow-up, in September 2016, two members of the Dutch parliament proposed a Climate Act to anchor these ambitions into Dutch legislation. The bill puts clear long-term targets in place: it requires a national greenhouse gas emissions reduction of 55 per cent in 2030 and a reduction of 95 per cent in 2050 (in comparison to the levels in 1990). It also requires that the share of renewable energy must be 100 per cent by the end of 2050. The bill also provides for new policy instruments, such as a climate change plan and budget, but does not stipulate how these targets must be met. It is therefore currently unclear how the proposed Climate Act, if adopted, would affect Dutch climate change policy.

The EU Energy Efficiency Directive 2012/27/EU has been implemented in the Activities Decree. Among others, companies are required to conduct energy audits (every four years) to identify energy-saving measures that could decrease energy consumption within their businesses. In addition, companies are required to implement all energy-saving measures with a return on investment period of five years or less. Also, as of 2023, every office building exceeding a floor area of 100 square metres must comply with the requirements of an energy performance certificate label C or higher (labels run from G up to A). If the building does not meet these minimum energy performance requirements, it may no longer be used for office purposes as of 2023.

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10 Council of State 17 May 2017, ECLI:NL:RVS:2017:1259 and ECLI:NL:RVS:2017:1260.

11 European Court of Justice 7 November 2018, ECLI:EU:C:2018:882.

**i ETS**

As any other EU Member State, the Netherlands participates in the ETS for trading greenhouse gas emission allowances. The Dutch implementing laws are contained in the EMA, and require that listed facilities obtain a separate greenhouse gas emission permit from the Dutch Emissions Authority (NEa). Said permit will not impose emission limits, but instead will set out the framework for the facility's monitoring plan. Companies must monitor their emissions throughout the year in accordance with this plan, and annually report on their emissions by means of a verified emissions report. Subsequently, the participating facilities must surrender sufficient allowances to compensate the emissions of the previous year. In most cases, facilities are eligible for a quantity of free allowances, while further emission allowances may be obtained through auctions or transactions with other parties participating in the ETS. According to the website of the NEa, around 450 companies in the Netherlands participate in the ETS, including industrial sectors and energy companies. The aviation industry has also been a participant in the system since 2012. During the current third phase of the ETS (2013–2020), auctions gradually replace free allocation as the most important method for allocating allowances.

In future, the above-discussed (national) rules will be included in the new Environment and Planning Act.

**ii Urgenda case**

One of the most remarkable judgments relating to climate change is the landmark judgment of the District Court in The Hague of 24 June 2015.<sup>12</sup> This judgment not only caught the attention of the Dutch media, but also that of the foreign media. The District Court in The Hague ruled that the state of the Netherlands must take more action to reduce the greenhouse gas emissions. More specifically, the state has to ensure that the Dutch greenhouse gas emissions in the year 2020 will be at least 25 per cent lower than those in 1990. This is the first time that a court has ordered a government to set higher climate change targets. Not surprisingly, the ruling has encountered criticism. According to some scholars, the District Court's ruling violates established case law of the Dutch Supreme Court, holding that a mandatory order to the legislature is fundamentally at odds with the constitutional role of the judiciary and is therefore not possible. Some scholars have even argued that climate change is a political question that should not be addressed in court at all. In September 2015, the Dutch government filed an appeal against the District Court's ruling.

The Court of Appeals in The Hague ruled on the appeal on 9 October 2018.<sup>13</sup> It agreed with the District Court that the state must ensure that the Dutch greenhouse gas emissions in the year 2020 will be at least 25 per cent lower than those in 1990. The Court of Appeals therefore upheld the District Court's ruling. This was rather surprising and not expected by many scholars. The Dutch government recently announced that it will appeal the judgment of the Court of Appeals to the Supreme Court.

**iii Offshore Wind Energy Act**

An Offshore Wind Energy Act (OWEA) entered into force on 1 July 2015 and provides for a completely new legal framework for the construction and operation of offshore wind

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12 District Court of The Hague 24 June 2015, ECLI:NL:RBDHA:2015:7145.

13 Court of Appeals of The Hague 9 October 2018, ECLI:NL:RBDHA:2015:7145.



farms. The OWEA aims to accelerate and streamline the decisions and authorisations required for an offshore wind farm. In short, the OWEA distinguishes between three stages of decision-making: the designation of areas for the construction of wind farms in the National Water Plan; the adoption of site decisions by the relevant ministers, specifying the exact location and the conditions under which a wind farm can be constructed and operated; and tendering an OWEA permit to a project developer granting the exclusive right to construct and operate the wind farm.

Following the successful tenders for the Borssele wind farm zones, the Dutch Ministry of Economic Affairs and Climate Policy recently completed, for the first time in the Netherlands, a tender for the development of an offshore wind farm without renewable energy state subsidies. The tender covered wind farm zones Hollandse Kust (Zuid), Sites I and II.

## VIII OUTLOOK AND CONCLUSIONS

As indicated, Dutch environmental law is on the eve of the largest system reform to date: the introduction of the Environment and Planning Act and its implementing legislation. Through the Act, the Dutch government aims to combine and simplify the regulations for projects that have an impact on the environment. The Act integrates 26 current acts (including, for instance, the above-mentioned Water Act, but also the Crisis and Recovery Act and legislation on zoning and planning, etc.), reducing 5,000 statutory provisions to 350, 120 orders in council to four, and 120 ministerial decrees to 10. The Act should result in fewer regulations applying to a project and reduce the burden on companies, *inter alia*, in respect of conducting studies. Moreover, the Act aims for quicker and better decision-making, allowing more room for private initiatives.

The upcoming Environment and Planning Act – which is expected to enter into force on 1 January 2021 – will heavily impact Dutch environmental law, and at least in the long term provide for a more streamlined and simplified set of legal requirements. In the short term, this system reform follows relatively shortly after the introduction of the Water Act in 2009 and the WABO in 2010. At that time, these Acts already meant a major shift in Dutch environmental law, and their introduction showed that the day-to-day legal practice requires some time to adapt to new laws and regulations. It is, therefore, likely to take some time before the benefits of the upcoming Environment and Planning Act are truly enjoyed.

# PORTUGAL

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## I INTRODUCTION

According to the Overview of the OECD's Economic Survey for Portugal in 2017, structural reforms have led to a successful rebalancing of the Portuguese economy towards exports, which appears to be gaining ground, although the continuation of the rebalancing of the economy will require more investment.

As of December 2015 the new government has been focused on reversing austerity measures adopted during the Economic Adjustment Programme and on strengthening the economy. Several legal regimes focused on environmental issues have been published since, with the majority of them having originated from EU law or published to comply with EU targets and objectives.

In this context, during 2018, the most relevant legal framework included the new legal regime for prevention and control of pollutant emissions into the air and the respective ministerial orders, the National Strategy for Nature Conservation and Biodiversity 2030, the new law on removal of asbestos in buildings, installations and equipment, the new legal regime on mandatory air quality controls for the detection of legionella and the revision of the 2020 Urban Waste Strategic Plan (PERSU 2020+).

As regards planned legislative initiatives, there are also new targets for the reduction of the use of plastics and the new legal regime on contaminated land.

## II LEGISLATIVE FRAMEWORK

Environmental protection and climate change laws and regulations originate mainly from three sources: international treaties or conventions; EU law; and national law.

International treaties and conventions, once signed, must see their ratification approved by a resolution of Parliament and ratification itself shall occur by means of a decree of the President of the Republic. Portugal is a party to all of the main treaties and conventions regarding environmental protection and climate change.

EU law is one of the main sources of environmental legislation, consisting mainly of regulations and directives. Regulations are directly enforceable in domestic law and do not need to be enacted. However, it is very common for a decree-law to be published to ensure the execution of the obligations of the regulation into Portuguese law. Directives are subject to enactment into Portuguese law within a specific time frame. Many directives, however, are enacted after the term has elapsed. Enactment occurs by means of publication

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of a decree-law in the Portuguese Official Gazette. The main legal regimes on environmental protection, including climate change, are a result of the enactment of EU directives and of EU regulations.

In relation to national law, the Constitution of Portugal establishes that both Parliament and the government have legislative powers divided according to the specific matter at stake. While certain matters are of the exclusive competence of Parliament, others are of the competence of the government, exclusively or subject to a legislative authorisation granted by Parliament. As regards the legislative acts themselves, laws are issued by Parliament while decree-laws, regulations, resolutions, regulation decrees, ministerial orders and ministerial dispatches, among other acts, are issued by the government. Legislative acts are published in the Portuguese Official Gazette.

### III THE REGULATORS

The main regulatory agencies responsible for enforcing environmental legal framework are the following.

#### i The General Inspection of Agriculture, Sea, Environment and Spatial Planning

The General Inspection of Agriculture, Sea, Environment and Spatial Planning (IGAMAOT) is the main environmental inspection body. It carries out inspections regarding all activities and all public and private entities with environmental relevance, imposing the measures that prevent or eliminate situations of severe danger to human health, safety of persons, of goods and of the environment. The IGAMAOT carries out specific functions equivalent to those of a criminal police body whenever an environmental crime may be at stake and may also initiate and decide misdemeanour procedures according to the Environmental Misdemeanour Framework Law. It may act and carry out inspections without previously being informed by other entities of a possible breach of environmental legislation and may enter any premises and carry out the inspections it deems necessary. It is normal for industrial operators to have their installations inspected without previous notice at least once every three years. The IGAMAOT is hierarchically dependent of the Deputy Minister to the Prime Minister, of the Minister of the Environment and Energy Transition, of the Minister of Agriculture, Forests and Rural Development and of the Minister of the Sea.

#### ii The Portuguese Environment Agency

The Portuguese Environment Agency (APA)'s mission is to propose, develop and monitor the integrated and participated management of environmental and sustainable development policies, in tandem with other sectorial policies and in cooperation with public and private entities seeking the same purpose taking into view a high level of environmental protection and the rendering of high-quality services to citizens. The main functions of this regulatory body are:

- a to propose, develop and monitor environmental policies, especially as regards climate change, management of water resources, waste, ozone layer protection, air quality, recovery and remediation of contaminated sites, integrated pollution prevention and control, noise prevention and control, prevention of major industrial accidents risks, environmental and population safety, ecological labelling, voluntary environmental compliance systems, as well as environmental impact assessment and environmental assessment of plans and programmes;

- b* act as national water, waste and dam authority;
- c* develop and ensure the implementation strategic options, policies and measures envisaging a low-carbon economy, in particular the mitigation of greenhouse gas emissions and adaptation to climate change, and to act as national authority for the EU emissions trading system and as national authority for the implementation of the Kyoto Protocol;
- d* act as national authority for integrated pollution prevention and control and for strategic environmental assessment; and
- e* act as competent authority for the environmental liability regime. As regards the enforcement of climate change policies, the APA and the IGAMAOT are the most important agencies. The APA is subject to the control of the Minister of the Environment and Energy Transition.

### **iii The Water and Waste Regulatory Authority**

The Water and Waste Regulatory Authority (ERSAR) ensures the regulation and supervision of the water and waste services and aims to increase the efficiency and effectiveness of the provision of these services. It is responsible for establishing the water and waste tariffs and for ensuring the regulation of quality of service rendered to end users by management entities. ERSAR is an independent administrative agency according to the Regulatory Entity Framework Law and is not subject to governmental control.

### **iv The Institute for Nature Conservation and Forests**

The Institute for Nature Conservation and Forests (ICNF)'s mission is to propose, develop and ensure the execution of nature conservation and forests policies, taking into view the conservation, sustainable use, recovery, use and recognition of the natural assets. Its main functions are to act as a national authority for nature and biodiversity conservation and as a national forest authority; and to ensure the management of the national network of protected areas and the implementation of the Natura 2000 network, including marine protected areas. The ICNF is subject to the control of the Minister of the Environment and Energy Transition, the Minister of Agriculture, Forests and Rural Development, and the Minister of the Sea.

### **v Regional spatial planning commissions**

There are five regional spatial planning commissions (CCDRs) within the Portuguese continental territory. Their mission is to execute the environment, planning, cities and regional development policies. They are responsible for executing, assessing and inspecting, at a regional level, the environmental and planning policies, in tandem with the other regulatory bodies of the Ministry of Environment. As regards environmental issues, their competences include, at a regional level, environmental assessment of projects, industrial licensing, soil decontamination operations, licensing of waste operations, air quality management and air pollution prevention, noise prevention, integrated pollution prevention and control, environmental assessment and licensing of quarries. The CCDRs are subject to the control of the Minister of Planning and Infrastructure, the Deputy Prime Minister, and the Minister of the Environment and Energy Transition.

**vi The Directorate-General for Natural Resources and for Maritime Services and Safety**

The mission of the Directorate-General for Natural Resources and for Maritime Services and Safety (DGRM) is to execute the policies for preservation and knowledge of natural marine resources, for fisheries, aquaculture, transformation industry and related activities, development of maritime services and safety, including the maritime ports sector. Some of its competences are:

- a* to ensure a framework of knowledge regarding the available marine resources within the Portuguese territory, regarding inventory, use and planning of the maritime space;
- b* to authorise and license structures and productive activities regarding maritime fishing and aquaculture;
- c* to exercise its functions regarding the prevention of pollution from ships;
- d* to propose, in tandem with the ICNE, the creation of protected marine areas; and
- e* to license and inspect the use of waters located in protected marine areas.

The DGRM is subject to the control of the Minister of the Environment and Energy Transition and of the Minister of the Sea.

As regards the enforcement of environmental legislation by the courts, Portuguese courts traditionally tend to be somewhat lenient and often reduce the amount of the fines determined by public regulatory authorities or of the criminal sentence proposed by the Public Prosecutor's Office, whenever they consider said amount or sentence to be exaggerated. Furthermore, environmental misdemeanour procedures and crimes deal with matters that are of a very technical nature and the courts are not always comfortable deciding based on very specific technical and scientific details. Finally, as regards environmental misdemeanours, courts may decide differently from the regulatory authority that applied the fine and decide to apply a fine of a higher amount considering that the prohibition on imposing a heavier or stricter decision does not apply to the environmental misdemeanour procedures of the Environmental Misdemeanour Framework Law.

## **IV ENFORCEMENT**

Whenever a violation of environmental laws and regulations occurs, different types of liability may arise.

As regards civil liability, the applicable regime under the Civil Code establishes that whoever, with wilful misconduct or negligence, causes damage to a third party must pay compensation to that party. Therefore, should any action resulting from an industrial operator, any individual or any activity cause damage to a third party, the latter will be entitled to request compensation. According to the causality principle under the civil liability regime, a causal link between the damage caused and the action or activity at stake must always exist. Strict liability will only apply whenever expressly foreseen by the law.

Administrative liability in relation to the state due to pollution or damage caused to the environment will also exist. Considering the 'polluter pays' principle, the liability and the recovery principles established in the Environmental Framework Law, any person or industrial operator that causes pollution or environmental damage will be liable for the damage caused, must bear the costs related to said damage, including the costs associated with any prevention and control measures, must pay compensation whenever foreseen in the law and must also restore the environment to its previous state. Further, for the purposes of administrative

liability, the environmental liability regime is a key piece of legislation that must be taken into account. According to this legal regime, which enacted EU Directive 2004/35/EC, whenever environmental damage or the imminent threat of environmental damage occurs, the liable party must adopt prevention and repair measures and bear the associated costs. Strict liability will apply whenever the damage caused by the operator was a result of an activity listed in Annex III of the legal regime that contains a list of the activities considered to present a greater risk to the environment and to be more susceptible to causing environmental damage or threats. Additionally, mandatory financial guarantees must be put in place by operators that carry out the activities listed in Annex III to guarantee said measures. Third parties are also entitled to request compensation under the general rules of civil liability.

Misdemeanour liability due to pollution or environmental damage must also be taken into account. The vast majority of misdemeanours due to environmental damage are governed by the Environmental Misdemeanour Framework Law. According to this law, environmental misdemeanours can be considered light, serious or very serious, depending on the gravity of the infraction.

For very serious environmental misdemeanours, the applicable fine ranges between €10,000 and €200,000 for individuals, and between €24,000 and €5 million for companies. Whenever the presence, emission or release of one or more hazardous substances seriously affects the health, safety of persons and goods and the environment, the minimum and maximum limits of the above-mentioned fines may be elevated to double the amount.

For serious environmental misdemeanours, the applicable fine ranges between €2,000 and €40,000 for individuals, and between €12,000 and €216,000 for companies.

In the case of light environmental misdemeanours, the applicable fine ranges between €200 and €4,000 for individuals, and between €2,000 and €36,000 for companies.

Ancillary penalties can also be applied alongside very serious and serious environmental misdemeanours, comprising, among other things, the:

- a* prohibition to apply for subsidies and public benefits;
- b* prohibition to participate in public tenders;
- c* suspension of licences and authorisations;
- d* closing down of industrial establishments or sites subject to authorisation or licence issued by a public authority;
- e* sealing of equipment; and
- f* seizure of animals.

As regards the misdemeanour procedure itself, once an individual or operator is notified of an environmental misdemeanour procedure, he or she must present his or her defence to the regulatory authority that initiated the procedure within a maximum term of 15 working days. The final decision of the regulatory authority may be challenged in court.

Finally, the Criminal Code establishes the situations where criminal liability may arise owing to the practice of environmental crimes as a result of damage to the environment or to nature. The environmental crimes section of the Criminal Code establishes the following crimes:

- a* Crime of damage to nature (Article 278): damage to biodiversity and serious damage to subsoil resources is punished with up to five years of imprisonment. Further, the trading of protected wild fauna or flora species, alive or dead, is punished with imprisonment

of up to a maximum of two years or with a fine of up to 360 days. The possession of said species is punished with imprisonment of up to a maximum of one year or with a fine of up to 240 days.

- b* Crime of pollution (Article 279): if the agent pollutes the air, the water and the soil, he or she will be punished with up to five years of imprisonment. If the conduct of the agent does not cause pollution but is susceptible of affecting the air, water or soil quality or fauna or flora, it will be punished up to a maximum of three years of imprisonment or with a fine of up to 600 days.
- c* Crime of dangerous activities to the environment (Article 279-A):
  - if the agent executes shipments of waste in breach of Regulation (EC) No. 1013/2016, on shipments of waste, he or she will be punished with up to three years of imprisonment or with a fine of up to 600 days. In the case of negligence, the agent will be punished with up to one year of imprisonment or with a fine; and
  - if the agent, in breach of the applicable legislation, produces, imports, exports, places in the market or uses ozone-depleting substances, he or she will be punished up to a maximum of one year of imprisonment or with a fine of up to 240 days. In the case of negligence, the agent will be punished with up to six months of imprisonment or with a fine of up to 120 days.
- d* Crime of pollution with common danger (Article 280): whenever a conduct foreseen in Article 279 causes danger created to life or to the physical integrity, to other people's assets with a high value or to cultural or historical monuments, it will be punished with imprisonment ranging from one to eight years if the conduct and the creation of danger is intentional and of up to a maximum of six years if the conduct is intentional and the creation of danger is due to negligence.

Companies and not only individuals may be considered subject to criminal liability owing to the practice of an environmental crime under the terms foreseen in the Criminal Code.

## V REPORTING AND DISCLOSURE

Portuguese law does not contain a general rule or procedure regarding the disclosure of permit violation, contamination or climate change. However, the main environmental legal regimes establish the obligation to report any breach, violation or malfunction to the competent authorities and to adopt all necessary measures to prevent or repair environmental damage.

Any industrial operator holder of an environmental licence (integrated pollution and prevention control) under the Industrial Emissions Regime must report to the authorities any breach or violation of legislation or of the applicable emission limit values (including emissions to water, soil or air), any malfunction of the industrial establishment or any complaint received. Further, these operators are under the obligation to send to the APA, until 30 April each year, an annual environmental report containing all information regarding the functioning of the industrial installation in the previous year, any breaches of legislation, malfunctions, complaints and any other information related to environmental compliance. The Industrial Emissions Regime establishes that any event that may significantly affect the environment must be notified to the authorities within 48 hours.

Under the environmental liability regime, whenever an imminent threat of environmental damage occurs, the operator must immediately adopt, irrespective of any

notification or request by the authorities, the necessary and adequate prevention measures and inform the APA immediately of all details associated to said threat and of the measures taken. If environmental damage occurs, the legal regime foresees a maximum term of 24 hours within which the APA must be informed of all details related to the occurrence and the operator must immediately adopt, irrespective of any notification or request by the authorities, all feasible measures in order to control, contain, eliminate or manage pollution and contamination.

As regards the sale and purchase of property where pollution and contamination exist, there are no legal duties to disclose potential liabilities to purchasers. However, under the Civil Code there is an obligation to negotiate and execute contracts according to good faith principles. There is no legal obligation to disclose environmental liabilities in financial statements or reports.

## VI ENVIRONMENTAL PROTECTION

### i Air quality

The legal framework regarding air quality is set forth in Decree-Law No. 39/2018, which establishes the regime on prevention and control of pollutant emissions into the air and is applicable to:

- a* combustion installations with a rated thermal input ranging between 1MW and 50MW (medium combustion installations (MIC));
- b* complexes of new MIC;
- c* industrial activities in accordance to Annex I, Part 2;
- d* combustion installations that burn refinery fuel for the production of energy within oil and gas refineries; and
- e* furnaces and burners of industrial activities with a rated thermal input ranging between 1MW and 50MW.

According to this new legal regime, the APA shall issue an air emissions title for installations that are subject to the continuous monitoring of at least one pollutant. This title is integrated in and is part of the single environmental licence.

The emission limit values regarding emissions to air are set forth in Annex III of this legal regime.

Two new ministerial orders were published in 2018, further to the publication of Decree-Law No. 39/2018:

- a* Ministerial Order 190-A/2018, setting the height of chimneys and its calculation; and
- b* Ministerial Order 190-B/2018, setting the emission limit values for specific industrial sectors.

The following three ministerial orders were revoked in 2018:

- a* Ministerial Order 80/2006 (as amended), setting the minimum and maximum mass thresholds that define the monitoring conditions of emissions of pollutants to the atmosphere;
- b* Ministerial Order 675/2009 (as amended), setting the general emission limit values applicable to the majority of installations and establishments; and
- c* Ministerial Order 677/2009 (as amended), setting the emission limit values for combustion installations.



Monitoring obligations may be periodic or continuous. Whenever the mass flow emission is inferior or equal to maximum mass thresholds set forth in Part 1 of Annex II and above or equal to the average exceeds mass thresholds set forth in Part 1 of Annex II, monitoring will be periodic and must occur twice a year or, in certain particular situations, according to a different schedule. Continuous monitoring of atmospheric emissions is mandatory whenever the mass flow emission exceeds the maximum mass thresholds set forth in Part 1 of Annex II or whenever the licence or title for the functioning of the industrial establishment expressly determines that this type of monitoring must be carried out.

For combustion installations whose capacity is superior to 50MW, the applicable emission limit values are the ones set in the Industrial Emissions Regime, which enacted Directive 2010/75/EU

The Industrial Emissions Regime contains the emission limit values regarding emissions to the air to be complied with in relation to combustion installations whose capacity is more than 50MW, installations that use organic solvents and issue organic volatile compounds and installations that produce titanium dioxide.

Decree-Law No. 39/2018 only applies to installations subject to the Industrial Emissions Regime on a subsidiary basis, regarding matters not regulated by said regime.

According to the polluter pays principle, an operator that causes damage to the environment through air pollution is under an obligation to pay compensation to the state and may also have to pay compensation to third parties under civil liability rules. The breach of this legal regime is an environmental misdemeanour, which can be considered light or serious depending on its gravity, and determines the payment of fines, along with possible ancillary penalties.

The General Inspector of IGAMAOT and the CCDR, whenever a situation of serious danger to the environment or to human health is at stake, may adopt the necessary measures to prevent or eliminate the danger situation, such as the suspension of activity, closing down of the totality or part of the installation or seizure of all or of part of the equipment.

Whenever the breach refers to emission limit values contained in an environmental licence issued under the Industrial Emissions Regime, an environmental misdemeanour will be at stake and fines will apply, alongside with possible ancillary penalties.

The environmental liability legal regime does not apply directly to damages caused to the air.

Finally, emission limit values for air emissions are considered to be quite strict and it is not rare for operators to have difficulties in complying with the applicable legal framework.

## **ii Water quality**

The Water Law (Law 58/2005), which enacted the EU Water Framework Directive (Directive 2000/60/EC) and the Water Use Legal Regime (Decree-Law 226-A/2007) are the two key legal regimes regarding water management, use and protection.

As regards quality standards, Decree-Law 236/98 establishes the rules, criteria and quality objectives with the purpose of protecting water quality. The annexes of this legal regime contain:

- a* the emission limit values to be observed in relation to the discharge of waste water to the water or to the soil taking into view their protection against pollution;
- b* the maximum values for the different parameters in water considering its use; and
- c* the environmental objectives for water resources.

Quality standards vary according to the type of water (surface water, groundwater, bathing water, fishing water, etc.) and to its purpose (e.g., human consumption). Annex XVIII contains the emission limit values for the discharge of wastewater.

These standards generally apply to all industries and activities and are in line with EU water quality standards set forth in EU Directives.

In relation to permits, the use of water resources and the occupation of the public hydric domain is subject to the previous obtainment of a water use title, which, depending on the type of use, can be a licence, a concession or an authorisation, issued by the APA, which is the National Water Authority. The discharge of wastewater is normally subject to a licence. In the case of industrial installations, subject to an environmental licence under the Industrial Emissions Regime, the use of water resources demands the separate obtainment of a water use title that will be annexed to the environmental licence.

According to the Water Law and to the Water Use Legal Regime, the following activities are prohibited:

- a* use of water resources without the necessary title. Deliberate dilution of wastewater so as to comply with emission limit value;
- b* discharge of sludge in superficial or in underground waters;
- c* immersion of waste in breach of the environmental objectives for the water bodies;
- d* abandonment or unauthorised discharge of radioactive waste in superficial, underground, transition, coastal and sea waters and in wastewater drainage systems; and
- e* according to Decree-Law 236/98, the direct discharge into groundwater of certain hazardous substances is also prohibited.

A new National Water Plan was published under Decree-Law 76/2016. This plan is foreseen in the Water Law and its purpose is to establish the strategic options of the national water policy to be implemented by the river basin management plans for the 2016–2021 period and by the associated specific measure programmes. Water management under this plan envisages three main objectives: the protection and recovery of the status of aquatic ecosystems and also land ecosystems and wetlands dependent therefrom, as regards water necessities; the promotion of a sustainable, balanced and equal use of water of a good-quality status, considering its various uses and its economic value, based on a long-term use of available water resources; and the mitigation of the effects of flood and droughts.

The contents of this new plan will most probably determine, in the short run, the amendment of water quality standards in a stricter manner to ensure that Portugal meets water quality standards set at the EU level.

Account should also be taken of the new legal regime on water quality for human consumption, published through Decree-Law 152/2017. This establishes new rules for water quality control techniques and defines new parameters. The frequency according to which the quality of the water intended for human consumption is controlled becomes flexible in certain situations, provided there is no risk for human health. Entities managing the water supply for human consumption may be exempted from certain rules of the water quality control programmes as long as risk assessments are made and approved by the Water and Waste Regulatory Authority. There will be strong emphasis on laboratories carrying out water tests to comply with internationally agreed procedures and to use validated methods. The mentioned entities will also be required to draft a plan for communication and response regarding water quality emergencies.

Decree-Law 152/2017 came into effect on 1 January 2018, and the rule on the mandatory plan for communicating emergency situations related to water quality came into effect on 1 January 2019.

### **iii Chemicals**

Decree-Law 82/2003 (as amended) approved the Regulation on Classification, Labelling, Packaging and Safety Data Sheets of Dangerous Mixtures. According to the Regulation, the mixtures can only be placed on the market if they are classified, labelled or packaged under the terms of the Decree-Law and of the Regulation.

This Decree-Law also establishes the obligation to provide information to the Directorate General for Economic Activities, to the Poison Information Centre and to the National Institute for Medical Emergency, to be carried out by the person or entity responsible for the placement of the mixture in the market.

Decree-Law 98/2010 establishes the regime on Classification, Labelling, Packaging of Hazardous Substances for human health or the environment taking into view their placement in the market. This legal regime (1) transposes Directive 2006/121/EC to adapt it to the Council Regulation (EC) No. 1907/2006 of 18 December related to the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH Regulation); (2) guarantees the execution of Article 55 of Regulation EC 1272/2008 of 16 December regarding the classification, labelling and packaging of substances and mixtures (CLP Regulation); and (3) enacts, in part, Directive 2008/112/EC.

Further, Decree-Law 293/2009 ensures the implementation and execution of the obligations arising from REACH Regulation, which establishes a European Chemicals Agency and aims to ensure a high level of protection of human health and of the Environment, including the promotion of alternative methods for assessment of hazards of substances, as well as the free circulation of substances in the internal market while enhancing competitiveness and innovation.

REACH lays down some specific duties and obligations on manufacturers, importers and downstream users of substances on their own, in preparations and in articles. This Regulation is based on the principle that it is for manufacturers, importers and downstream users to ensure that they manufacture, place on the market and use such substances that do not adversely affect human health or the environment. Its provisions are underpinned by the precautionary principle.

REACH sets out procedures for the registration, evaluation, authorisation and restriction of chemicals, as follows.

The registration provisions should require manufacturers and importers to generate data on the substances they manufacture or import, to use said data to assess the risks related to these substances and to develop and recommend appropriate risk management measures. Registered substances should be allowed to circulate on the internal market.

The evaluation provisions should provide for follow-up to registration, by allowing for checks on whether registrations are in compliance with the requirements of REACH and if necessary by allowing for generation of more information on the properties of substances.

The authorisation provisions should ensure the good functioning of the internal market while assuring that the risks from substances of very high concern are properly controlled. For these purposes and to ensure that substances of very high concern are progressively

replaced by suitable alternative substances or technologies, all manufacturers, importers and downstream users applying for authorisations shall analyse the availability of alternatives and consider their risks, and the technical and economic feasibility of substitution.

The restriction provisions should allow the manufacturing, placing on the market and use of substances presenting risks that need to be addressed, to be made subject to total or partial bans or other restrictions, based on an assessment of those risks. Manufacturers and importers are also obliged to register relevant information in a central database (the European Chemicals Agency).

REACH entered into force in 2007 and its provisions are being phased-in over 11 years. As regards national requirements, according to the REACH Regulation, the person or entity responsible for the placement of dangerous substances in the market shall provide relevant information on those substances to the Poison Information Centre and to the National Institute for Medical Emergency, prior to placing them in the market; and make the relevant information on the substances classified as hazardous available to the IGAMAOT and to the Authority for Economic and Food Safety.

All permit applications must be complete and truthful and all permit requirements carefully followed. Required environmental controls and equipment shall not be neglected (except as allowed by and in compliance with the law).

#### **iv Solid and hazardous waste**

The Waste Management Legal Regime (Decree-Law 73/2011 as amended) is the framework legal regime regarding waste management, applicable to both hazardous and non-hazardous waste.

Waste management activities are subject to a licensing procedure directed by the APA or by the CCDRs.

Whenever a waste management activity is carried out in installations included in the thresholds of Annex I of the Environmental Impact Assessment Legal Regime the licensing authority will be the APA. In all other situations, including soil decontamination operations, the licensing authority will be the CCDR. A specific licence will be issued in relation to the waste management activity (e.g., collection, transportation, recovery and elimination).

As regards waste elimination, operators of landfill sites must obtain an environmental licence according to the Industrial Emissions Regime, as well as two insurances: (1) insurance to cover closure and post-closure obligations; and (2) insurance to cover accidental pollution events. These operators must also have a fully paid up share capital of at least:

- a* €250,000 (for inert waste landfills); and
- b* €1 million (for hazardous or non-hazardous waste landfills).

The elimination of hazardous waste in specific facilities is subject to an autonomous legal regime.

Further, operators that carry out the collection, transportation, recovery and elimination of hazardous waste must hold a financial guarantee to cover their environmental liability under the environmental liability regime.

As regards waste streams, a new legal regime named Unilex was published through Decree-Law 152-D/2017, setting new rules for the management of waste streams and enacting Directive 2015/720/EU on lightweight plastic carrier bags and Directives 2016/774/EU and 2017/2096/EU on end-of-life vehicles.

All the rules on the management of specific waste streams (packaging, used oils, used tyres, electrical and electronic equipment, batteries and accumulators, and end-of-life vehicles) have been grouped together in this new legal regime.

Individual and collective waste management systems are responsible for ensuring the appropriate treatment of waste to achieve Portugal's agreed recycling and recovery targets.

Decree-Law 152-D/2017 is intended to contribute to more sustainable production and consumption by empowering the different participants in a product's life cycle (production, marketing, consumption and waste management), reducing the amount of waste to be disposed of, using resources more efficiently, recovering raw materials with economic value and making managing procedures of these wastes more effective. This Decree-Law came into effect on 1 January 2018.

During 2018, new licences for various waste management entities responsible for specific waste streams were published and determine that all existing agreements entered into with waste producers or other entities must be reviewed to guarantee conformity with the new licences. There are new measures and targets for the reduction of the use of plastics, currently being planned or already approved by Parliament Resolutions or by Resolutions of the Council of Ministers, regarding the end of single-use plastic disposable cutlery and specific measures for the reduction of plastic use.

## **v Contaminated land**

Although this matter has been extensively discussed by various governments and by various sectors of society, Portugal does not have a specific legal regime for contaminated land. Whenever it is necessary to carry out soil decontamination operations they will be subject to previous licensing under the Waste Management Legal Regime by the CCDRs.

In 2011, the APA issued a non-binding guide regarding the assessment of imminent threat and environmental damage according to the Environmental Liability Regime (Decree-Law 147/2008). The guide contains a specific chapter on how to assess damage to soil and soil contamination situations, including prevention measures, risk analysis and repair and monitoring plans. The Ontario Rules for soil decontamination are the reference used to assess the level of contaminants in the soil.

Landowners are not required by law to investigate and assess the contamination level of their property although regulatory authorities can order assessments and clean-up operations whenever a pollution or contamination event is verified or comes to their knowledge.

However, specific provisions are starting to be inserted in municipal zoning plans (e.g., Lisbon Municipal Master Plan) to render mandatory a site risk assessment in relation to plots of land where, owing to past activities, it is considered likely that the soil is contaminated with hazardous substances to human health or the environment. In these cases, a mandatory decontamination plan must be drafted and executed to restore the environment to an acceptable status as determined by the competent authorities.

According to the polluter pays principle, the operator responsible for causing pollution or environmental damage is liable and must carry out and pay the costs associated to environmental damage and clean-up, adopting the necessary measures to prevent further threats and damage to the environment. However, where the owner of the land was not the polluter, if there is an imminent threat or serious danger to the environment, authorities can demand that the current owner carry out the environmental investigation and clean-up,

including prevention and remediation measures. In these cases, the owner shall have a right of redress in relation to the liable party. Public authorities may also carry out the clean-up and decontamination operations directly with right of redress in relation to the liable party.

The majority of the environmental legal framework applicable to activities that are most likely to cause pollution demand operators to hold financial guarantees to cover their liability in relation to pollution events, including the Environmental Liability Regime. Whenever environmental damage is caused and this legal regime applies the operator must adopt prevention and remediation measures. If the operator does not have the capacity or know-how to carry out *in situ* decontamination, he or she may hire a specialised company to carry out the operation or, alternatively, remove the contaminated soil from the site or installation and deliver it to a duly licensed waste management operator. The failure to adopt prevention or remediation measures when directly determined by the APA is a very serious environmental misdemeanour. The failure to immediately adopt prevention or remediation measures, when an imminent threat or environmental damage occurs, is also a serious environmental misdemeanour.

In September 2015, the APA disclosed a legislative proposal regarding a legal regime for the prevention of soil contamination and for soil remediation, and launched a public hearing open to all citizens. At the time of writing, however, there has been no news from public authorities or from the Ministry of Environment and Energy Transition regarding the approval of this proposal by the government.

#### **vi Environmental impact assessment**

The environmental impact assessment legal regime underwent two amendments in 2017. First, Law 37/2017 rendered environmental impact assessment mandatory for all activities pertaining to the exploration of hydrocarbons. Second, Decree-Law 152-B/2017 enacted Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment. The amendments introduced apply as of 1 January 2018.

### **VII CLIMATE CHANGE**

Portugal's carbon trading scheme is set forth in Decree-Law 38/2013 (as amended), enacting Directive 2004/101/EC, amending Directive 2003/87/EC and establishing a scheme for greenhouse gas emission allowance trading within the European Community (the Amended Emissions Trading Directive).

Operators subject to this legal regime must hold a permit allowing them to emit greenhouse gases (GHG). GHG emissions must be monitored and certified annually and this information sent to the APA. The permit is annexed to the environmental licence of the operator issued under the Industrial Emissions Regime. The auctioning of allowances is also foreseen and is carried out according to the EU Emissions Trading Scheme Auctioning Regulation (EU Regulation No. 1031/2010).

According to the Climate and Energy Package 2020 for the 2013 to 2020 period, Portugal must limit the increase of GHG emissions for the sectors not included in the EU Emissions Trading Scheme to 1 per cent in relation to 2005. For renewable energies in the raw final consumption of energy, a new goal of 31 per cent has been adopted, 10 per cent of which is allocated to transport. A general goal to reduce the consumption of primary energy to 25 per cent and a specific goal for the public administration of reduction to 30 per cent has also been adopted.

Portugal approved the Green Growth Commitment, imposing certain goals to be achieved in 2020 and 2030. For 2030, the main goals are the following:

- a* to reduce GHG emissions between 30 and 40 per cent (52.7 to 61.5 million metric tonnes of carbon dioxide equivalent (MtCO<sub>2</sub>e)) in relation to 2005;
- b* to increase the share of renewable energies in the final consumption of energy to 40 per cent; and
- c* to increase energy efficiency through a reduction of 30 per cent over the energy baseline in 2030 translated into an energetic intensity of 101 tep/MEUR GDP.

The Strategic Framework for the Climate Policy, approved in 2015, provides that Portugal must reduce its GHG emissions to values of -18 to -23 per cent in 2020 and to -30 to -40 per cent in 2030, compared with 2005 values, depending on the results of European negotiations.

Portugal has also created the National Action Plan for Renewable Energies, establishing the goals regarding the share of Portugal's energy supply from renewable sources for energy consumption in 2020, as well as the National Action Plan for Energy Efficiency.

Regarding energy efficiency, Portugal has implemented an energy certification system for buildings (destined for housing or commercial purposes), with the purpose of improving the energy performance of buildings and making the obtainment of energy certificates mandatory.

Additionally, through the EU 2020 funding programme, Portugal approved an Operational Programme of Sustainability and Efficiency in the Use of Resources, that focuses, among other issues, on available funding in order to achieve the goal to increase energy efficiency in the housing sector and to reduce the annual estimated GHG emissions, limiting, for 2023, the value of GHG emissions to 80.640T CO<sub>2</sub>e.

The National Air Strategy was approved by Resolution of the Council of Ministers 46/2016, focusing on the improvement of air quality, by protecting human health, the quality of life for citizens and ensuring the preservation of the ecosystems. It imposes the following goals:

- a* compliance with the emissions and air quality goals in 2020;
- b* compliance with air-quality improvement targets in 2020;
- c* establishment of a plan to achieve the air-quality goals recommended by the World Health Organization in the long term; and
- d* cooperation with climate policy to ensure that the measures concerning air pollutants and greenhouse gas emissions will benefit the air quality and climate change.

The Paris Agreement on climate change was adopted in December 2015, and entered into force on 1 November 2016. Its central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.52°C. The Paris Agreement also aims to strengthen the ability of countries to deal with the impacts of climate change. Portugal ratified the Paris Agreement on 30 September 2016.

More recently, in December 2018, the government presented the National Road Map for Low Carbon (RNBC 2050). This document aims to guarantee that Portugal reaches carbon neutrality in 2050.

To do so, the RNBC 2050 defined the areas that will play a key role, such as energy, transportation, waste, agriculture and forests, and circular economy, and some measures to

achieve it, such as increasing the use of electrification of the economy to 65 per cent, solar energy production, the reduction of greenhouse gases from the industry in 70 per cent or from the production of urban solid waste in 25 per cent.

The RNBC 2050 also mentions that the next decade will be decisive for Portugal. As a result, and in line with this consideration, Portugal will have more economic sectors using electricity produced from renewal energy sources that will be key to reduce greenhouse gases between 85 per cent to 99 per cent in comparison to 2005.

In conclusion, by 2030, RNBC 2050 envisages that 80 per cent of the energy produced in Portugal will come from renewable sources, in order to progressively achieve 100 per cent 20 years later. The most significant reduction of greenhouse gases is expected to occur between 2020 and 2023.

The RNBC 2050 shall undergo a period of public consultation.

## **VIII ENVIRONMENTAL EDUCATION**

The National Environmental Education Strategy was approved by Resolution of the Council of Ministers 100/2017, focusing on the improvement of the environmental literacy, in order to guarantee a society that is more conscientious, innovative and entrepreneurial, and a national debate of the values of sustainable development.

The main goals of this strategy are the decarbonisation of the economy and of society, the support of circular economy and the enhancement of the territory.

## **IX OUTLOOK AND CONCLUSIONS**

We anticipate that one of the greatest challenges for Portugal will be to implement the revision of the PERSU 2020+, recently presented by the Ministry of Environment and Energy Transition, in order to achieve a significant reduction of waste production, including landfill diversion. The achievement of the new targets and objectives of the EU Circular Economy Action Plan and of National Circular Economy Plan 2017–2020, approved by the Resolution of the Council of Ministers 190-A/2017, is also a big challenge, in specific owing to the lack of financial incentives that are key for the successful implementation of public policies. Also, the implementation of RNBC 2050 will play a very important role in the decarbonisation of the Portuguese economy.

Although this is a matter that tends to be controversial considering the financial impacts for the industry and for landowners, we expect that in the short term a specific legal regime for the prevention of soil contamination and for soil remediation will be published. Finally, the new legislation, recently approved by the government, regarding mandatory air controls of legionella bacteria and on the removal of asbestos in buildings, installations and equipment, has created additional administrative burden for the industry and services sector.



# RUSSIA

*Sergey Kozlov<sup>1</sup>*

## I INTRODUCTION

The basis of the state environmental policy until 2030 was approved by the President of Russia on 30 April 2012. The policy defines strategic targets, major tasks of state in the field of environmental conservation and mechanisms of their implementation. Russia also adopted the Environmental (2002) and Climatic Doctrines (2009). These documents define strategic goals, objectives and principles, as well as the main directions of the state policy in the field of ecology and climate.

The strategic goals of the state policy in the field of environmental development are:

- a* finding solutions to social and economic issues that ensure environmentally oriented economic growth;
- b* the preservation of a favourable environment, biological diversity and natural resources;
- c* the realisation of everyone's right to a favourable environment;
- d* strengthening of the rule of law in the field of environmental protection; and
- e* ecological safety in the long term.

The main directions of state environmental policy in Russia are:

- a* ensuring a sustainable development and sustainable environmental management;
- b* resource-saving and reduction of environmental pollution; and
- c* conservation and restoration of the natural environment.

In 2014, the state programme Environmental Protection for 2012–2020 was approved, which includes seven subprogrammes as well as the federal target programme for the protection of Lake Baikal until 2020 and the priority project known as 'Clean Country'.

The ecological situation in Russia is characterised by a high level of anthropogenic impact (pollution of the environment by products of human activity and depletion of soil, water, mineral, forest and biological resources as a result of economic and other activities) to the natural environment and serious environmental consequences of past economic activity. In 40 regions of Russia, more than 54 per cent of the urban population is under the influence of high and very high atmospheric air pollution.<sup>2</sup>

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1 Sergey Kozlov is managing partner of SKS Confidence Law Firm.

2 Fundamentals of state policy in the field of environmental development of Russia for the period up to 2030, dated 30 April 2012.

One of the most important causes of environmental problems in Russia is the inefficient and natural resource-intensive structure of the economy. Therefore, one of the main tasks of state environmental policy in Russia is to reduce the overall anthropogenic load on the environment, based on improving the environmental efficiency of the economy.

Regarding climate change, Russia proceeds on the premise that Russia's interests related to climate change are not confined only to the territory of the country and are global in nature. However, in the development and implementation of the state policy on climate, priority is given to national interests while ensuring the clarity and transparency of Russia's climate policy.

A considerable part of the Russian territory consists of areas of maximum (as observed and predicted) climate change.<sup>3</sup> For a long time, Russia has been one of the countries with the highest level of greenhouse gas emissions. Nevertheless, the total amount of greenhouse gas emissions in the country has decreased by more than 46 per cent as compared to 1990.<sup>4</sup>

The Climate Doctrine of the Russian Federation provides for the development and implementation of measures to reduce anthropogenic emissions of greenhouse gases and increase their absorption by sinks, in particular:

- a* increase of energy efficiency in all sectors of the economy;
- b* development of renewable and alternative energy sources;
- c* reduction of market disproportions and implementation of fiscal policies that encourage the reduction of anthropogenic emissions of greenhouse gases; and
- d* protection and enhancement of sinks of greenhouse gases, including sustainable forest management, afforestation and reforestation on a sustainable basis.

In 2015, Russia signed the Paris Climate Agreement, which confirms Russia's commitment to the collective goals of the world community to combating global warming. Currently, preparations are underway to ratify the Paris Agreement.

Politically 'green' movements do not substantially play any role in the life of the country. In the parliamentary elections of 2016, the Russian environmental party Zelenye (the Greens) gained only 0.76 per cent of the vote. In general, there is a rather low level of environmental awareness among the population, and therefore environmental initiatives often do not receive widespread support from the population.

## II LEGISLATIVE FRAMEWORK

In accordance with Article 42 of the Constitution of Russia, everyone has the right to a favourable environment, reliable information about its condition and to compensation for damage caused to his or her health or property by an environmental offence. To this right corresponds a duty, which is enshrined in Article 58 of the Constitution, to preserve nature and the environment, and to take good care of natural resources.

According to Article 72 of the Russian Constitution: land, water and forest legislation, and legislation on subsoil and environmental protection come under the joint jurisdiction of the federal government and the local governments.

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3 Order of the President of Russia of 17 December 2009 No. 861-rp 'On the Climate Doctrine of the Russian Federation.'

4 Considering the absorbing capacity of ecosystems.

The universally recognised principles and norms of international law and international treaties of Russia are an integral part of the national legal system (Part 4, Article 15 of the Constitution). Therefore, ratified international treaties in the field of ecology have direct effect in Russia and have priority over the norms of national legislation. Russia is a party of more than 70 multilateral international treaties, agreements and conventions on environmental issues.

The main law in the field of environmental protection is the Federal Law 'On Environmental Protection' No. 7-FZ of 10 January 2002. This Law regulates relations in the sphere of interaction between society and nature that arise during the implementation of economic and other activities related to the impact on the natural environment within the territory of Russia, as well as on the continental shelf and in the exclusive economic zone of Russia.

As one of the founding principles of the activities that impact on the environment, the Law establishes, in particular:

- a* payment for use of nature and compensation for damage to the environment;
- b* independence of state environmental oversight;
- c* presumption of environmental hazard of the planned economic and other activities;
- d* compulsory assessment of the impact on the environment when making decisions on the implementation of economic and other activities;
- e* priority of conservation of natural ecological systems, natural landscapes and natural complexes; and
- f* responsibility for violation of legislation in the field of environmental protection and others.

This Law provides for the principle of payment for the use of nature by charging to the budget fees for the negative impact on the environment of the following types:

- a* emissions of pollutants into the atmospheric air by stationary sources;
- b* discharge of pollutants into water bodies; and
- c* storage, disposal of production and consumption waste (waste disposal).

At the same time, certain activities in the field of environmental protection are subject to licensing.

To regulate the impact of economic and other activities on the environment, thereby guaranteeing the preservation of a favourable environment and ensuring environmental safety, the Law provides for rationing in the field of environmental protection, that is, the establishment of:

- a* environmental quality standards;
- b* norms of permissible impact on the environment in the implementation of economic and other activities;
- c* other standards in the field of environmental protection; and
- d* federal norms, rules and regulations in the field of environmental protection.

The Law establishes the duty of legal entities and individual entrepreneurs to conduct in relation to the planned economic and other activities that may have a direct or indirect impact on the environment, an assessment of the impact on the environment. In addition, in

several cases, ecological expertise (state or public) is conducted to establish the compliance of documents and documentation that justify the planned economic and other activities with environmental protection requirements.<sup>5</sup>

To protect the environment, the competent authorities carry out state environmental monitoring and state environmental oversight.

Issues of environmental protection are paid attention in other laws, including:

- a* the Federal Law 'On Radiation Safety of the Population';
- b* the Federal Law 'On Protection of Atmospheric Air';
- c* the Federal Law 'On Specially Protected Natural Territories';
- d* the Water Code of the Russian Federation; and
- e* the Forest Code of the Russian Federation.

Federal legislation on environmental protection is subject to frequent changes, and existing laws contain many contradictions and gaps. One solution to these problems is a proposed codification of environmental legislation within the framework of a single Environmental Code, the development and adoption of which has been proposed over the years by the scientific community and some public organisations.

In many parts of Russia there are independent laws on the protection of the environment, specially protected natural areas, waste, environmental funds, etc., regulating regional issues and establishing environmental protection measures at the regional level. Some regions of Russia, such as Bashkortostan and Tatarstan, have adopted environmental codes.

Decisions of courts (precedents) are not generally recognised as a source of law in Russia. However, judicial practice is important in terms of the application of law, interpretation and clarification of its individual norms.

In the field of ecology, the Resolution of the Plenum of the Supreme Court of the Russian Federation of 18 October 2012 No. 21 'On The Application By The Courts Of Legislation On Liability For Violations In The Field Of Environmental Protection And Nature Management' is of great importance.

It should also be called the Resolution of the Plenum of the Supreme Court of the RF of 30 November 2017 No. 49 'On Some Issues of the Application of Legislation on Compensation for Damage Caused to the Environment', which outlines the basic principles for the application of environmental protection legislation by the courts, and clarifies the scope, methods, grounds and procedure for compensation of harm caused to the environment.

### III THE REGULATORS

The Ministry of Natural Resources and Environment (MNR) is the key governmental authority responsible for environmental protection and natural resources. The competence of the Ministry includes issues of the use and protection of subsoil, water objects, forest resources and wildlife; specially protected natural areas; environmental protection and ensuring environmental safety; protection of atmospheric air; handling of production and consumption wastes (excluding radioactive wastes); improvement of economic mechanisms for regulating the use of natural resources; and environmental protection.

Under the supervision of the MNR are five services that perform functions to provide public services and manage federal property in certain areas. These are:

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5 See Federal Law 'On Ecological Expertise' No. 174-FZ of 23 November 1995.

- a* the Federal Service for Supervision of Use of Natural Resources;
- b* the Federal Service for Hydrometeorology and Environmental Monitoring;
- c* the Federal Water Resources Agency,
- d* the Federal Agency for Subsoil Use; and
- e* the Federal Forestry Agency.

Issues of technological and nuclear supervision, control functions in the sphere of safe operations related to subsoil use, industrial safety, safety in the use of nuclear energy, spent fuel management and the safety of radioactive waste management are within the competence of the Federal Service for Ecological, Technological and Nuclear Supervision (Rostekhnadzor), which is directly subordinate to the Russian government.

These state bodies independently carry out legal regulation and develop regulatory legal acts on issues within their competence; they exercise control and supervision functions.

In accordance with Article 46 of the Russian Constitution, decisions and actions (or inaction) of public authorities, local governments, public associations and officials may be appealed to the court. Since September 2015, cases of contestation of normative legal acts, decisions, actions (inaction) of public authorities, officials and other cases arising from administrative and other public legal relations are subject to review in administrative proceedings in accordance with the Administrative Court Procedure Code of the Russian Federation.

## **IV ENFORCEMENT**

For a breach of environmental law there are established civil, administrative, criminal and disciplinary liabilities. Compensation for damage to the environment is carried out in accordance with the Civil Code, the Land Code, the Forest Code, the Water Code, Federal Law No. 7-FZ 'On Environmental Protection', other laws and regulatory legal acts on environmental protection and environmental management. The failure of a person to administrative, criminal or disciplinary responsibility does not exclude the possibility of imposing on him or her the obligation to compensate for harm to the environment. Equally, bringing a person to administrative, criminal or disciplinary responsibility is not a basis for exempting a person from the obligation to eliminate the violation and compensate for the harm caused to him or her.

### **i Civil liability**

In accordance with the legislation, legal entities and individuals that cause damage to the environment as a result of its pollution, depletion, damage, destruction, irrational use of natural resources, degradation and destruction of natural ecological systems, natural complexes and natural landscapes and other violations of legislation in the field of environmental protection should compensate the damage in full (voluntarily or by a court decision).

As a general rule, in accordance with Article 1064 of the Civil Code and Article 77 of the Law 'On Environmental Protection', a person who has caused harm to the environment is obliged to compensate him or her if there is guilt. The law may provide for compensation for harm and in the absence of guilt of the injurer.

Thus, by virtue of Article 1079 of the Russian Civil Code, legal entities and citizens whose activities are associated with increased danger to others are obliged to compensate for the damage caused by the source of increased danger, regardless of the presence of guilt, if

they do not prove that the damage was caused by *force majeure*. In this regard, for example, the owner of the pipeline is responsible for environmental damage caused as a result of the illegal tapping into the pipeline by third parties.<sup>6</sup>

Compensation for damage caused to the environment can be carried out by recovery of damages or by imposing on the defendant the obligation to restore the disturbed state of the environment (Article 1082 of the Civil Code, Article 78 of the Law 'On Environmental Protection'). The choice of the method of compensation for the harm caused when applying to the court is made by the claimant.

Damage to the environment caused by a legal entity or an individual entrepreneur is reimbursed in accordance with the rates and methods of calculating the amount of damage to the environment approved by the federal executive authorities and, in their absence, based on actual costs of restoring the disturbed state of the environment, considering the losses incurred, including loss of profits. According to a court decision, it is also possible to restore the disturbed state of the environment at the expense of the injurer in accordance with the restoration project, if there is an objective possibility of restoring the environment and the offender can perform restoration work within a reasonable time frame.

Claims for compensation for damage to the environment caused by violation of legislation in the field of environmental protection can be brought within 20 years. At the same time, the limitation of action for compensation of losses and damage caused by radiation impact on the environment is three years from the day when the person learned or should have learned about the violation of his or her rights.

Persons who jointly caused harm to the environment shall be jointly liable (Article 1080 of the Civil Code). However, the court has the right to impose a solidary liability on such persons, based on their individual degree of guilt.

If several persons acted independently of each other and the actions of each of them led to environmental damage, according to the general rule, such persons bear shared responsibility (Article 1064 of the Civil Code).

The damage caused to the health of citizens by the negative impact of the environment is also cause for compensation for moral harm.

## **ii Administrative liability**

Administrative liability in the field of environmental protection comes only for offences set forth in the Code of Administrative Offences of the Russian Federation (Chapter 8). Currently, the Code contains 52 elements of offences that establish liability for administrative violations in the field of environmental protection and nature management.

Within the framework of administrative liability, the offender can be warned or fined, the products and technical means of committing an environmental offence seized, or the offender may be deprived of a licence to use natural resources or conduct entrepreneurial activities related to environmental management. Instead of a fine for certain offences, an administrative suspension of activities for up to 90 days is possible.

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6 The Resolution of the Plenum of the Supreme Court of the Russia of 30 November 2017 No. 49 'On Some Issues Of The Application Of Legislation On Compensation For Damage Caused To The Environment'

Sanctions of the Code on most of the norms provide alternative types of punishment; that is, they give the law enforcer freedom to determine the penalty and its size (for example, choosing the size of the fine between the specified minimum and maximum). The Code outlines various penalties for citizens, officials, legal entities and individual entrepreneurs.

At the same time, administrative liability is often combined with civil liability in the form of compensation for harm caused to the environment.

### **iii Criminal liability**

Criminal liability for environmental crimes is established by Chapter 26 of the Criminal Code of the Russia. Environmental crimes risk danger to the public because they encroach on people through nature, by destroying or qualitatively deteriorating the natural environment. Violation can be carried out by both action and inaction.

The types of crimes envisaged in the Criminal Code are, as a rule, material; that is, responsibility comes only when material, socially dangerous consequences occur. However, there are some formally defined crimes.

### **iv Procedural issues**

Cases bringing civil liability for causing harm to the environment are considered by the courts of general jurisdiction (in the case of guilty individuals) or by the Arbitrazh courts (not arbitration courts), if the offender is an enterprise or an entrepreneur. The person can be brought to administrative responsibility not only by the court, but also by the competent executive authorities. Criminal liability is possible only by a court decision. Only an individual can be brought to criminal responsibility. Criminal liability of legal entities is not provided in Russia.

The subjects of applications to the court for cases of violations of legislation in the field of environmental protection and nature management are:

- a* individuals and legal entities;
- b* the prosecutor;
- c* federal bodies of executive power authorised to exercise state environmental oversight, and their territorial bodies;
- d* executive bodies of Russian subjects authorised to implement regional state environmental oversight;
- e* local government bodies;
- f* other bodies in cases provided for by law; and
- g* public and other non-profit associations (i.e., associations or unions) that have the status of a legal entity and carry out activities in the field of environmental protection.

The litigation in Russia is adversarial, that is, the parties are free to provide their evidence. In the civil process, each party must prove the circumstances to which it refers as grounds for its claims and objections. In administrative and criminal proceedings, the presumption of innocence prevails, that is, the person against whom proceedings are being conducted in the case of an offence are presumed innocent until proven guilty according to the established procedure, established by an effective court decision (or body or official in administrative process). The person that is brought to responsibility is not obliged to prove his or her innocence, and all irremovable doubts about the person's guilt are interpreted in his or her favour.

Decisions of courts can be appealed in the higher courts, and decisions on the case of an administrative offence may be appealed both administratively (to a higher authority or higher official) or in the courts.

## **V REPORTING AND DISCLOSURE**

The issues of disclosure of environmental information in Russia are not sufficiently developed at the current level of legislation. For example, there is currently no detailed regulation of the disclosure of environmental information by the state. Currently, the MNR is working to improve legislation to join Russia to the UNECE Aarhus Convention. The government is currently drafting a law that will define 'environmental information', establish the procedure for access to it and work out the issues of classifying such information as publicly available (placed by state bodies and local governments on the internet in the form of public data).

Any natural resource user in Russia is obliged to provide environmental reporting to the supervisory authorities. This reporting includes, in particular, reporting about payment of fees for negative environmental impact, reporting on waste generation, a technical report on the unchanged production process, statistical reporting (for waste, air and water), etc.

The provision and publication of non-financial reporting in the field of environmental protection and ensuring environmental safety for business is not mandatory today. Thus, there is a problem of stimulation of Russian companies and organisations to voluntary representation of non-financial reporting under international standards in the field of preservation of the environment and maintenance of ecological safety. Nevertheless, a substantial number of large companies (including the largest Russian energy companies) currently voluntarily disclose their environmental performance indicators and environmental policy. The requirement for mandatory disclosure of environmental reporting by large companies is tentatively scheduled to be introduced by 2023.

However, at the time of writing, according to the instructions of the President of Russia, the government is working to introduce mandatory disclosure of non-financial reporting in the field of environmental protection, ensuring environmental safety by public companies, state organisations, corporations and companies with state participation provided for by international standards.

## **VI ENVIRONMENTAL PROTECTION**

### **i Air quality**

The quality of atmospheric air is determined by its compliance with hygienic standards of air quality and environmental quality standards for atmospheric air. The environmental quality standards are set by the Ministry of Natural Resources and Ecology, and hygienic standards are set by the Federal Service for Supervision of Consumer Rights Protection and Human Welfare. At present, a large number of standards are in force in the form of determining the maximum permissible concentrations, an approximate safe level of exposure to certain substances in the atmospheric air, etc.



To regulate emissions of harmful (polluting) substances into the atmosphere, the following are established:

- a* technical emission standards;
- b* maximum permissible emissions;
- c* maximum permissible standards of harmful physical effects on atmospheric air; and
- d* technological emission standards.

Technical emission standards are established for certain types of stationary sources of emissions, as well as for transport or other mobile means and facilities, and are universal. The maximum permissible emissions are set in relation to a particular stationary source of harmful (polluting) substances into the atmosphere and their aggregate (the organisation as a whole).

Draft standards for maximum permissible emissions are developed by the organisation itself, taking into account individual characteristics, passing a series of approvals, and then being submitted for approval to the territorial body of the Federal Service for Supervision of Use of Natural Resources. The approval of standards for maximum permissible emissions of radioactive substances is within the competence of the territorial bodies of the Federal Service for Environmental, Technological and Nuclear Supervision.

Harmful physical impact on atmospheric air is allowed under a permit issued by the authorised body and on a paid basis. For emissions of radioactive substances into the air by a stationary source, a special permit is issued that establishes the maximum allowable release of radioactive substances (for seven years).

Since 2019, state regulation measures in the field of environmental protection (including air emissions) are applied to the enterprises depending on the category of the object being operated with a negative environmental impact assigned to such an object by the state registration.<sup>7</sup>

Emissions of harmful (polluting) substances into the air at the facilities of category I are carried out on the basis of a comprehensive environmental permit. Emissions of harmful (polluting) substances at the facilities of hazard category II are carried out on the basis of the declaration on environmental impact submitted to the authorised state body.

For emissions of harmful (polluting) substances into the atmospheric air at facilities of category III, obtaining a comprehensive environmental permit and filling out a declaration on environmental impact are not required. Subjects engaged in economic or other activities shall submit to the authorised state body in a notification procedure reports on emissions of harmful (polluting) substances into the atmospheric air.

Permanent state monitoring of atmospheric air is carried out in order to control the quality of atmospheric air, as well as state supervision in the field of atmospheric air protection. Legal entities and individual entrepreneurs who pollute the atmospheric air using stationary sources are obliged to conduct industrial control over the protection of atmospheric air or to organise environmental services, and to conduct inventory of stationary sources and emissions of harmful (polluting) substances. The law also provides for public control over the protection of atmospheric air.

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<sup>7</sup> See Article 4.2. Law 'On Environmental Protection', Resolution of the government of Russia of 28 September 2015, No. 1029 'On approval of the criteria for classifying objects that have a negative impact on the environment, to objects of categories I, II, III and IV'.

## **ii Water quality**

Maintenance of surface and groundwater quality is ensured by establishing and observing the norms of permissible impact on water bodies by nature users. Standards for permissible impact on water bodies are developed by the Federal Agency for Water Resources with the participation of other bodies on the basis of the maximum permissible concentrations of chemicals, radioactive substances, microorganisms and other water quality indicators in water bodies. The developed standards are also approved by the Federal Agency for Water Resources in the presence of a positive conclusion of the state ecological expertise.

The amount of substances and microorganisms contained in wastewater discharges into water bodies should not exceed the established standards for permissible impact on water bodies.

In accordance with the established standards for permissible impact on water bodies, water users develop standards for permissible discharges of substances (excluding radioactive substances) and microorganisms into water bodies, which are approved by the Federal Water Resources Agency in agreement with other state bodies.

The norms of permissible discharges of radioactive substances into water bodies for water users are approved by Rostekhnadzor, in consultation with other state bodies.

## **iii Chemicals**

Decisions of the Chief State Sanitary Doctor of Russia approved hygienic standards for the maximum permissible concentration of chemicals in soil, water and air. The standards for the maximum permissible emissions of chemicals and microorganisms in the air are approved as part of the standards for maximum permissible emissions into atmospheric air. Regulation of the impact of chemicals contained in waste on the environment is carried out through the establishment of the legal regime of production and consumption of wastes.

In addition, there is the Federal Law 'On the Safe Management of Pesticides and Agrochemicals' No. 109-FZ of 19 July 1997, which regulates the issues that arise in the implementation of public administration in the field of the safe handling of pesticides and agrochemicals. The Law provides that during the registration tests of pesticides and agrochemicals, an environmental assessment should be conducted of the regulations for their use, and that the results of registration tests should include the conduct of state environmental experts.

## **iv Solid and hazardous waste**

The Federal Law 'On Production and Consumption Wastes' No. 89 FZ of 24 June 1998 defines the legal basis for handling production and consumer waste in order to prevent the harmful effects of wastes on human health and the environment.

The degree (class) of hazardous waste is determined in accordance with the applicable legal acts. Depending on the degree of its impact on the environment, waste is divided into five hazard classes:

- a* class I: extremely hazardous;
- b* class II: highly hazardous;
- c* class III: moderately hazardous;
- d* class IV: low-hazard; and
- e* class V: virtually non-hazardous waste.

Radioactive waste management is regulated by the special Federal Law 'On Radioactive Waste Management' No. 190-FZ of 11 July 2011.

Activities on collection, transportation, handling, utilisation, neutralisation, placement of waste of I–IV hazard classes are subject to licensing. Accumulation of waste, namely, temporary storage of wastes for next utilisation, neutralisation, placement or transportation after 11 months can be carried out without a licence on the site where it was produced.

Currently, Russia is undergoing a major reform of legislation in the field of waste management; following the instructions of the President of Russia, a large number of regulatory legal acts have been adopted, including those aimed at stimulating the processing of production and consumption waste. Thus, Russia has finally begun to tackle the solution of one of the most pressing problems in the field of ecology: waste management.

For example, since 2018, the burial of scrap and non-ferrous metals was prohibited, and from 2019 is prohibited the burial at landfills of auto-tyre casing, plastic, glass packaging, packaging paper and cardboard, as well as other types of waste paper. The phased introduction of waste separation, and the introduction of the GLONASS satellite system for the transport of dangerous goods and wastes (Class I and II), etc., has also been implemented.

## **v Contaminated land**

In accordance with Paragraph 5 of Article 13 of the Land Code, persons whose activities have led to deterioration of the quality of land (including because of its pollution and soil disturbance) are required to ensure a land rehabilitation (recultivation). Land reclamation involves measures to prevent land degradation and restoring its fertility by bringing land to a condition suitable for use in accordance with its designated purpose and permitted use, including by eliminating the effects of soil pollution, restoring the fertile soil layer and creating protective forest plantations.

At the same time, the rehabilitation of lands violated by legal entities and citizens in the implementation of various activities that caused soil disturbance, as well as during storage, disposal of waste and contamination of land surface, is carried out using their own funds, if the restoration of these lands requires removal of the fertile soil layer.

If the negative impact on the land has led to its degradation, deterioration of the ecological situation or soil disturbance, as a result of which economic activity is not allowed, and the elimination of such consequences through recultivation is impossible, a land abandonment is allowed. The persons guilty of the land abandonment are also obliged to compensate for the losses (including the lost profit) to the owners of land plots in respect of which a conservation decision has been taken.

Regarding water bodies, Article 55 of the Water Code of the Russian Federation establishes an obligation of owners of water bodies to implement measures to protect water bodies, prevent their pollution and depletion of water, and take measures to eliminate the consequences of these. However, in general, harm is compensated by the person who caused it.

For a long time, a particular issue for Russia was the problem of eliminating accumulated harm. Accumulated harm is harm to the environment that has arisen because of past economic or other activities, where the obligation to eliminate the harm has not been met or has not been fully implemented. Special regulation of these issues only appeared in Russia in January 2017.

Work on the liquidation of accumulated harm to the environment can be carried out by state authorities of the subjects of Russia and local self-government bodies, and in some cases is carried out by an authorised federal body.

## **VII CLIMATE CHANGE**

Russia is currently working on the formation of a system for enterprises to monitor and report on greenhouse gas emissions, to develop a model for effective state regulation in this area. A draft law on state regulation of emissions is being developed (currently at the stage of interdepartmental agreement). The adoption of this law is planned in 2019. At the same time, fees can be introduced for greenhouse gas emissions, and maybe a mechanism for emission trading. These mechanisms require detailed elaboration, so as not to cause negative economic consequences because of additional impacts on businesses.

The largest share of greenhouse gas emissions in Russia comes from the energy sector. One of the means of increasing energy efficiency is the development of renewable energy. In Russia, hydropower traditionally has a high share in electricity generation (approximately 20 per cent), but generation based on other renewable sources (solar power, wind power, etc.) is still at the development stage, and amounts to approximately 1.5 per cent of the total generation.

The problem of insufficiency of renewable energy development is recognised by the government and is noted in the Energy Strategy; however, one of the problems in the development of renewable energy is that its use in Russia is not always economically justified (because Russia has huge hydrocarbon reserves, whose use is economically more profitable). Therefore, the development of renewable energy is not a priority for Russian energy policy.

According to the current Energy Strategy of Russia, the production of electricity based on renewable energy systems (RES) (except for hydropower with a capacity of more than 25MW) should account for about 7 per cent of the total generation until 2030. In the draft of the new Energy Strategy up to 2035, the statistics are significantly lower.

The support mechanisms only apply to RES with an installed generating capacity of not more than 25MW, and certain measures only apply to certain categories of RES. The main mechanisms for supporting RES in Russia are:

- a* subsidies from the federal budget that compensate for the cost of technological connection to the energy system;
- b* competitive selection of investment projects for the construction of generating facilities operating based on RES and the conclusion of contracts for the supply of capacity to the wholesale market in relation to selected projects;
- c* obligations of grid organisations on priority purchase of energy from RES to compensate for their technological losses during transmission on the retail electricity market; and
- d* a system of 'green' certificates confirming the production and sale of electricity from RES.

## **VIII OUTLOOK AND CONCLUSIONS**

In a departure from many Western countries, Russia lags behind in promoting environmental initiatives. Thus, for example, at the national level, there is currently no mechanism for trade in certificates for CO<sub>2</sub> emissions; support and development of renewable energy sources is not a priority of the state energy policy.

However, despite many serious problems in the sphere of ecology, the Russian leadership has taken serious steps in recent years to improve the environmental situation in the country. The authorities of the country are aware of the scale of environmental problems, the importance and the need for their immediate resolution. For these reasons, the Environmental and Climatic Doctrines are accepted, an appropriate legal and regulatory

framework has been created and separate programmes and projects in the field of ecology are being developed. In 2019, Russia will begin a full-scale reform of legislation in the field of waste management (including the introduction of waste separation in many regions). Also, the Russian government is taking measures to improve the mechanisms for disclosing environmental information and developing a system of state regulation of greenhouse gas emissions.

Owing to the scale and complexity of existing environmental problems, their solution requires serious financial investments and careful elaboration of means. In addition, many environmental problems are related to the structure of the Russian economy, with a need to improve the environmental and energy efficiency of the national economy. Achieving this goal is one of the priorities when developing the Russian economy for the future.

# SPAIN

*Carlos de Miguel and Bárbara Fernández<sup>1</sup>*

## I INTRODUCTION

The most relevant recent developments during 2018 regarding Spanish environmental legislation may be summarised as follows:

- a* Royal Decree-Law 18/2017 of 24 November, which imposes on certain large undertakings and groups the obligation to disclose non-financial and diversity information, including information on environmental matters. This Royal Decree-Law implements EU Directive 2014/95. An additional law is currently being discussed in Parliament that may introduce amendments to this Royal Decree-Law; and
- b* Royal Decree 6/2018 of 12 January, which creates a commission to pursue the incorporation of ecological criteria in public procurement.

Other rules worth mentioning are Royal Decree 1042/2017 of 22 December on the limitation of emissions to the atmosphere of certain pollutants from medium combustion facilities; Royal Decree 235/2018 of 27 April establishing calculation methods and information requirements in relation to the intensity of greenhouse gas (GHG) emissions from fuels and energy in transport; and Royal Decree 818/2018 of 6 July on measures to reduce national emissions of certain air pollutants.

In relation to expected new legislation, a law on climate change and energy transition is expected to be presented before Parliament for discussion.

## II LEGISLATIVE FRAMEWORK

Spanish environmental law is governed primarily by the 1978 Constitution. Article 45 sets the right to enjoy an adequate environment for the development of the people and the duty to preserve the environment. This Article also draws a distinction between three different areas of environmental responsibility, namely administrative, civil and criminal liability.

The mandates of the Constitution are implemented by laws and those, in turn, are complemented by regulations.

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The main national environmental regulations, most of which implement EU directives, are the following:

- a* Law 22/1988 on Coasts, which aims to protect the maritime-terrestrial public domain (e.g., by submitting to prior concession or authorisation certain activities and establishing easements and limitations to the ownership of land near the public domain);
- b* Royal Legislative Decree 1/2001 on Water, which aims to protect the hydraulic public domain by submitting to previous concession or authorisation certain activities, and establishing easements and limitations on the ownership of land near the public domain;
- c* Law 22/2011 on Waste and Polluted Soils, which aims to prevent the generation of waste and, where this is not possible, minimise the adverse effects on human health and the environment deriving from waste production and treatment. This Law also has articles specifically devoted to tackling soil pollution;
- d* Law 34/2007 on Air Quality and Atmospheric Environment Protection, which aims to establish the basic rules to prevent, monitor and reduce air pollution to minimise damage to people and the environment;
- e* Law 1/2005 governing the GHG emissions trading scheme;
- f* Law 27/2006 on the Right to have Access to Information, Public Participation and Access to Justice in Environmental Matters, which allows access to environmental information at the disposal of the public authorities as well as participation in the public decisions on environmental matters and the possibility of requesting the judicial review of public acts or omissions that may constitute environmental offences;
- g* Royal Legislative Decree 1/2016 on Integrated Pollution Prevention and Control, which applies to certain industries as listed in Annex I, such as certain combustion and chemical or waste management industries. It provides for a 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 authorisation are air and water emissions, production and management of waste and environmental impact assessments;
- h* Law 21/2013 on Environmental Assessment, which unifies under a single act the provisions related both to the environmental assessment of projects and of plans and programmes. Environmental assessments are not authorisations but a prior and binding requirement to obtain a certain authorisation or to issue a certain resolution. Authorisations or resolutions are null and void if the required environmental assessment was not conducted at all or was conducted in a defective manner;
- i* Law 42/2007 on Natural Heritage and Biodiversity, which establishes five basic types of protected natural spaces: parks, natural reserves, natural monuments, protected landscapes and protected marine areas, each with specific protection measures. In addition, according to European regulations and international treaties, other types of areas are protected in Spain. This is the case, for instance, for sites of community importance and special conservation areas. This Law also governs the protection of wild flora and fauna species. As a general rule, activities in any environmental protected area are restricted and only authorised when their compatibility with the environmental values is assured; and
- j* Law 26/2007 on Environmental Liability, which imposes the obligation to foresee, prevent and restore environmental damage in accordance with the precautionary principle and polluter-pays principle.

In addition to the above administrative rules, the Spanish Criminal and Civil Codes must also be taken into consideration. The Criminal Code includes a wide range of environmental offences, and the Civil Code includes general civil rules that may apply to tort, contractual liability and ownership in relation to environmental matters.

On the other hand, autonomous regions may enact laws and regulations of their own on environmental matters provided that they do not reduce the level of environmental protection established by the national rules. Also, municipalities may issue environmental regulations, which must always respect national and regional laws.

These environmental rules are further complemented by international environmental treaties such as:

- a* the United Nations Framework Convention on Climate Change (UNFCCC), New York, 1992;
- b* the Paris Agreement under the 21st Conference of the United Nations Framework Convention on Climate Change of 12 December 2015;
- c* the United Nations Convention on Law of the Sea, Montego Bay, 1982;
- d* the International Convention for the Prevention of Pollution From Ships, London, 1973;
- e* the Convention on Wetlands, Ramsar, 1971;
- f* the Convention on the Conservation of European Wildlife and Natural Habitats, Berne, 1979;
- g* the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, DC, 1973;
- h* the Convention for the Protection of the Mediterranean Sea Against Pollution, Barcelona, 1976; and
- i* the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal 1989.

International treaties are binding in Spain when they are published in the Official Gazette. Unless otherwise indicated, reference is made to national rules only in this chapter.

### III THE REGULATORS

As stated, powers on environmental matters in Spain are shared between the state, the autonomous regions and the municipalities as follows:

- a* The state has the power to enact basic environmental legislation and to control (e.g., by granting authorisations or sanctioning) certain specific environmental areas, namely those concerning water where more than one autonomous region is affected, certain aspects of the GHG emissions regime and certain environmental assessments. The state powers are generally executed through the Ministry for the Ecological Transition.
- b* The autonomous regions may issue rules for stricter environmental protection on top of the national legislation. Also, they have the power to control most of the environmental areas, such as integrated environmental authorisations, waste or air emissions. Regional powers are exercised through bodies equivalent to state ministries.
- c* Finally, municipalities' environmental powers mainly relate to municipal environmental permits, urban waste, air quality and noise limits. As previously indicated, city councils must respect national and regional laws when approving their own regulations.



Administrative resolutions (whether national, regional or municipal) may be appealed, either before the administration or before courts.

If there is a higher administrative authority to the one that issued the administrative resolution, an administrative appeal may be filed before said higher authority. In addition, it is possible (but not compulsory) to appeal before the same authority that issued the resolution.

If there is no such higher authority, or if the administrative appeal is dismissed, a court appeal may be filed.

Courts may confirm or quash any administrative resolution. Upon request, courts may suspend the administrative resolutions challenged provided that the execution of the resolution can cause serious damage to the party or to a third party and no damage to the environment can be caused. If the suspension is granted, courts can impose guarantees to ensure the protection of the environment or the third party's interest.

#### **IV ENFORCEMENT**

Environmental offences may lead to two types of liability, namely administrative and criminal liability. In addition, environmental liability may arise if a damage or risk of damage to the environment is caused; likewise, there may be civil liability for damages derived from environmental damages (e.g., loss of profits when a factory must be closed because its soil has been polluted by a neighbour, or health damage). In these two cases (environmental and civil liabilities) liability may arise regardless of whether there has been an offence of environment rules.

Each type of liability is directed to specialised courts (i.e., administrative, criminal or civil courts). While there are currently no specialised environmental courts, there is a national specialised environmental protection police: the Nature Protection Service.

Administrative liability consists of the failure to comply with the obligations under the administrative environmental laws. It is imposed after a sanctioning administrative procedure, which among other steps includes the right of the alleged offender to be heard. Sanctions may take the form of fines, suspension of the activity, closure of the premises or disqualification. Sanctions may be appealed as indicated in Section III.

In addition to the sanctions, offenders may be obliged to restore things to their prior state. Also, Law 26/2007 on Environmental Liability obliges operators to take measures to avoid environmental damage and, where damage has been caused, to remedy it. In this respect, there may be overlap with administrative rules.

Except as otherwise specified, the limitation period for environmental administrative offences is three years for very serious offences, two years for serious offences and six months for minor offences.

The Spanish Criminal Code devotes an entire section (Title XVI), plus some other articles (e.g., Articles 343 and 345) to crimes concerning the protection of national heritage and the environment. Among other penalties, sanctions may entail imprisonment, fines or disqualification.

For an action or omission to be deemed a criminal offence, it must be proven that the defendant acted either negligently – only when the Criminal Code expressly punishes negligent commission of said crime, which is not always the case – or intentionally. Spanish case law has broadened the concept of ‘intention’ or ‘purpose’ so that it also comprises recklessness (i.e., consciously disregarding a high risk of criminal offence) and in certain cases

‘wilful blindness’ (i.e., intentionally refusing to know the circumstances of a criminal offence that is being committed within one’s area of competence, despite knowing that said criminal offence is taking place).

Legal entities may also be held criminally liable. This liability is not alternative but cumulative to that of the individuals who have committed the criminal offence.

To prevent the criminal liability of legal entities, the Criminal Code includes a specific exonerating circumstance: the establishment of compliance programmes (‘organisation and management models’). These compliance programmes must be both approved and implemented to constitute a valid exonerating circumstance.

The basic environmental crime is contained in Article 325 of the Criminal Code as follows: anyone who in breach of an environmental rule directly or indirectly causes or makes emissions, spillages, radiation, extractions or excavations, filling with earth, noises, vibrations, injections or deposits, in the atmosphere, the ground, the subsoil or the surface water, ground water or sea water, including the high seas, even those affecting cross-border spaces, as well as the water catchment basins, that solely or in conjunction with others cause or may cause substantial damage to the quality of the air, soil, water, animals or plants may be sanctioned with imprisonment of up to two years, a fine of up to 14 months<sup>2</sup> and disqualification of up to two years (Article 325.1).

If the aforementioned conduct may cause serious damage to the balance of the natural systems, it may be sanctioned more severely with imprisonment of up to five years, a fine of up to 24 months and disqualification of up to three years (Article 325.2).

Environmental liability is briefly described in Section II.

Finally, civil liability consists of restoring or indemnifying the damage cause to a third private party as a consequence of an environmental damage. It is an independent liability from those mentioned above, and therefore can apply irrespective of, and in addition to, criminal liability or administrative sanctions. The general limitation period is one year for tort actions, and five years if there is a contract between the parties.

## V REPORTING AND DISCLOSURE

Operators whose activities can affect the environment are usually subject to periodic monitoring and reporting obligations as contained in the applicable laws or in their permits.

For instance, integrated environmental authorisations must include periodic reporting obligations as well as the obligation to report immediately to the authorities any incident or accident that may affect the environment.

Also, Law 21/2013 on environmental assessment includes the obligation to carry out monitoring plans, the result of which must be handed over to the authorities. Similarly, Law 26/2007 imposes on operators the obligation to immediately notify to the authorities any environmental damage or imminent threat thereof caused by them.

Failure to comply with these obligations may lead to administrative liability.

Companies have obligations on information disclosure in their financial reports as to environmental matters. Rules in this regard are set by Law 22/2015 on Account Auditing, Royal

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2 Criminal regulations calculate the total amount of the fine based on time, so a fine will be measured in days or months. According to the seriousness of the offence and the economic capacity of the offender, an amount per day will be established and the total fine will be a multiple of this and expressed in days or months.

Decree 1514/2007, which enacts the General Accounting Plan, Resolution of 25 March 2002 of the Institute on Accountability and Account Auditing and Royal Decree-Law 18/2017, of 24 November, which modified several regulations, including the Code of Commerce. Financial statements must include a specific chapter containing environmental information, such as expenditure incurred in environmental protection, environmental risks assured and pending judicial proceedings affecting the company, contingencies or investment owing to environmental reasons.

In relation to the protection for whistle-blowers, Article 62.4 of Law 39/2015 states that the authorities must exempt from administrative sanctions the first complainant participating in the commission of an offence provided that: the whistle-blower gives evidence of the offence that allows to confirm it or to initiate sanctioning proceedings against the rest of the offenders; the authorities did not have grounds enough to initiate the sanctioning proceedings at the time of the complaint; and the damage is repaired. If the aforementioned requirements are not fully met, the authorities must reduce the sanctions to be imposed if the whistle-blower provides evidence that implies a significant added value to the evidence that the authorities had.

In either case, protected whistle-blowers must cease their participation in the offence and must not have destroyed any evidence related to the offence.

Currently, it remains unclear how the authorities and courts will apply Article 62.4. Given its ambiguous wording in relevant elements, it may be anticipated that this Article will have a limited application.

There is no similar protection for whistle-blowers regarding criminal offences.

## VI ENVIRONMENTAL PROTECTION

### i Air quality

Law 34/2007 on Air Quality and Atmospheric Environment Protection governs the activities considered as potentially pollutant of the atmosphere. This Law:

- a* identifies the polluting substances that must be subject to certain emission limits;
- b* imposes that certain activities must obtain a previous air emission authorisation (labelled as A or B) or require a previous communication (labelled as C); and
- c* imposes additional obligations such as self-control and keeping an official registry book on air emissions.

The air emission limit values are established by the regional authorities taking into account:

- a* the implementation of best available techniques or other appropriate measures to prevent air pollution;
- b* technical characteristics of the installation, location and local environmental conditions;
- c* air emissions' nature, potential to transfer pollution from one medium to another and incidence for people and the environment; plans or programmes regarding air quality or gas emission reduction; and
- d* air emission limit values imposed by laws and regulations or international treaties of which Spain is party (Article 5 of Royal Decree 100/2011).

Implementing rules govern specific activities or pollutants. For instance, large combustion plants are subject to certain specific conditions under Royal Decree 815/2013 on industrial

emissions and in Royal Decree 430/2004 establishing new regulations on limitations of atmospheric emissions from large combustion plants whereas that medium combustion plants are subject to Royal Decree 1042/2017 on industrial emissions.

## **ii Water quality**

Royal Legislative Decree 1/2001 on Water governs fresh water and its associated land (the hydraulic public domain). Under this rule, the use of water for private purposes is subject to obtaining a concession granted by the Basin Authority. Other activities, such as the use of the river bed, or the discharge of wastewater, require an authorisation also granted by the Basin Authority.

Law 22/1988 on Coasts, which governs seawater and its associated land (the maritime-terrestrial public domain), follows a similar structure. Thus, the use of, occupation of or works on the maritime-terrestrial public domain are subject to authorisation or concession. Also, discharges from land into the sea require previous authorisation. Law 22/1988 is completed by Law 41/2010 on the protection of the maritime environment that governs the planning, conservation, protection and improvement of the environmental status of the maritime environment.

To better protect both hydraulic and maritime-terrestrial public domain, easements and limitations are imposed on the ownership of adjacent plots. Planning is also key for achieving an appropriate level of protection:

- a* Regarding hydraulic public domain, each basin has its own plans aimed to, *inter alia*, achieve good water conditions and adequately protect the water resources, satisfy water demands, achieve a balanced and harmonised regional and sectorial development, increase the availability of the resource, protect its quality and reduce the cost of its use.
- b* Regarding the maritime-terrestrial public domain, Law 41/2010 on the protection of the maritime environment sets out the obligation to draft specific strategic plans for each maritime area. The plans for each of the five Spanish maritime areas were approved by Royal Decree 1365/2018.

Further, granting intake concessions or discharge authorisation from the hydraulic public domain is based on the environmental status of the medium and the compatibility between the water intake or discharge and environmental sustainability. To determine both, the content of the specific basin plan applicable is key.

Regarding water discharges, as it is difficult to determine some unique maximum limits of general applicability, the discharge limit values applicable are set out in accordance with the specific circumstances at stake. Among those circumstances to be considered is the content of the specific plan applicable, which usually includes maximum discharge limit values or quality objectives, as well as the specific characteristics of the discharge to be authorised (e.g., location, pollutants or quantity).

Similar considerations are applicable when granting discharge authorisations to the maritime public domain. Based on the quality objectives applicable and the specific characteristics of the discharge, applications for discharges into maritime public domain authorisations may be rejected or limited to guarantee that no significant environmental alteration is caused (Article 57.3 Law 22/1988).

### **iii Chemicals**

The main Spanish provisions on chemicals, as most of the environmental legislation in Spain, come from EU rules. Indeed, one of the outstanding rules on chemicals is EU Regulation 1907/2006 on Registration, Evaluation, Authorisation and Restriction of Chemicals. This Regulation sets out specific duties and obligations (e.g., registration of substances and uses with the European Chemicals Agency) on manufacturers, importers and downstream users of substances on their own, in preparations and in articles. In addition, EU Regulation 1272/2008 governs the classification, labelling and packaging of chemical substances and preparations.

The national Law 8/2010 sets out the penalties applicable for any infringement of EU Regulations 1907/2006 and 1272/2008. As a complement, Royal Decrees 255/2003 and 363/1995 govern certain specific aspects on the classification, labelling and packaging of hazardous substances and preparations.

Further, Royal Decree 840/2015 on risk control for serious accidents where hazardous substances are involved, requires notification for the installation of activities that use certain hazardous substances and subjects those installations to several preventive conditions, such as the preparation of preventive policy plans, security reports or emergency plans. Depending on the existing quantity of dangerous substances, the facilities are classified as low- or high-risk facilities. High-risk facilities are subject to stricter obligations and requirements.

### **iv Solid and hazardous waste**

Law 22/2011 defines waste as any substance that the possessor disposes of or has the intention or obligation to do so. The Law includes definitions of different types of waste such as hazardous, domestic, commercial, industrial or biowaste.

Hazardous waste is that which has a hazardous characteristic as listed in Annex III of the Law and is considered as such by the European Union, national or regional regulations. The treatment of hazardous waste is subject to specific authorisations and must meet special conditions of storage, labelling and packaging as well as documentary obligations. In addition, the production of hazardous waste is subject to prior communication to the authorities or registration within the Hazardous Waste Small Producers Public Registry. Financial guarantees may be requested.

The collection of domestic waste is entrusted to the municipalities (non-hazardous commercial waste may also be so), whereas producers of industrial waste have the obligation to hand it over to authorised waste managers and keep record of its proper delivery. Waste managers must obtain a previous authorisation and have financial guarantees.

Certain types of waste are also subject to specific regulations. This is the case, among others, for waste packages governed by Law 11/1997 and Royal Decree 782/1998, waste from electrical and electronic equipment governed by Royal Decree 110/2015, construction and demolition waste governed by Royal Decree 105/2008, oil waste governed by Royal Decree 679/2006 or waste batteries governed by Royal Decree 106/2008.

Also, Spanish waste legislation includes the extended producer responsibility (i.e., the responsibility of the manufacturer of a product for its entire life cycle, and especially for its take-back, recycling and final disposal). Manufacturers may comply with these obligations on their own or collectively by means of an integrated management system, an organisation that assumes said obligations on behalf of all the adhering parties.

**v Contaminated land**

Law 22/2011 on waste and polluted soils, and Royal Decree 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.

Operators of activities included in the list of potentially soil-polluting activities under Royal Decree 9/2005 that produce, handle or store more than 10 tons per year of certain substances such as hazardous substances, or that have a fuel tank for private use with a average yearly consumption higher than 300,000 litres and a total storage volume of 50,000 litres or higher, had to file a preliminary soil report before 7 February 2007.

Thereafter, in view of the content of this report, the authorities had the option to request more detailed information. Operators then must update the soil report periodically before the regional authorities – the regularity of this update is determined by each autonomous region – and, in any case, when installing, enlarging or closing the activity. Likewise, owners must prepare a soil report when changing the use of the land or applying for a permit for a different activity.

In addition, owners of soils in which potential soil-polluting activities are or have been carried out must disclose this circumstance in the public deed of transfer of rights over the soil in question.

As a general rule, regional authorities are the ones with the power to declare a soil as polluted. For this purpose, risk for human health or the environment taking into account the specific use of the land must exist. The criteria to be considered for this declaration are set forth by Royal Decree 9/2005, which differentiates among industrial, urban or other uses of the land.

The persons obliged to clean up the site – in the manner imposed by the authorities – are, in this order, the polluter, the owner of the polluted site and the possessor thereof.

The declaration of soil as polluted must be included within the Property Registry and can only be removed when the regional authorities confirm that the clean-up has been duly carried out and that, therefore, there is no unacceptable risk to human health or the environment.

## **VII CLIMATE CHANGE**

Spain is a signatory party of the 1992 UNFCCC, which entered into force on 21 March 1994. In addition, on 22 April 2016, Spain signed the Paris Agreement resulting from the Paris Climate Conference, which sets out a global action plan to avoid dangerous climate change. The Paris Agreement entered into force on 4 November 2016.

The Ministry for the Ecological Transition is the administrative body that, at the national level, is responsible for 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 shaping 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, in charge of the coordination between the national and the regional authorities in this area. In addition, the autonomous regions have created specific bodies to implement policies on climate change within the scope of their powers.

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 in an effective and efficient manner. One of the most important measures has been the implementation of an emissions trading system (ETS) that aims to reduce GHGs by means of setting a cap on the total amount that can be emitted by certain installations, a cap that is reduced over time so that total emissions decrease.

EU Directive 2003/87/EC (as subsequently amended) establishes a scheme for GHG emission allowance trading. This Directive has been implemented in Spain by means of Law 1/2005 (also amended several times to implement the amendments to the Directive), which applies to facilities included in Annex I that generate certain GHG emissions, and to certain aviation activities with origin or destiny within the European Economic Area. The existing trading period started on 1 January 2013 and will end on 31 December 2020. Thereafter, successive eight-year periods will follow.

Facilities under Law 1/2005 must obtain a specific authorisation for emitting GHG, unless the facility is considered a small-scale installation. Regional authorities have the power to issue this authorisation. 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.

Operators subject to Law 1/2005 must have an emission allowance per each equivalent tonne of carbon dioxide emitted from its facility (or aircraft). Emission allowances are transferrable and registered within an ETS Registry.

Although it is envisaged that the auction becomes the main method for the allocation of emissions allowances, free allocation allowances may be requested to the Council of Ministers in certain cases.

In this regard, facilities included in sectors exposed to a significant risk of 'carbon leaks' will be granted 100 per cent free allocations.

Others sectors that do not pose a significant risk of 'carbon leaks' may also receive free allocations up to a maximum of 80 per cent, a percentage that will gradually decrease with the aim of reaching 30 per cent in 2020. The rest of the required allowances must be acquired in the auctions. These free allocations for sectors without risk of 'carbon leaks' are meant to disappear in 2027.

Power generators and capture, transportation and geological storage of carbon installations do not receive any free allowances except for certain high-efficiency cogeneration and urban heating and certain waste gases combustion power generators.

Aviation is also subject to free allocation of allowances, as only 15 per cent of the total amount of allowances is subject to auction.

Activities emitting GHGs must send the regional authorities, before 28 February every year, a verified report on GHG emissions of the previous year. This report will be assessed by the authorities to verify (among other circumstances) that the operator has obtained all the required GHG emission allowances.

Also, aviation operators must have a monitoring plan that includes certain measures to monitor and notify the data of their yearly emissions and tonne-kilometres transported. This monitoring plan must be approved by the Ministry for the Ecological Transition.

In addition to Law 1/2005, other national rules on climate change are worth mentioning:

- a* Law 40/2010 on the geological storage of carbon dioxide;
- b* Royal Decree 1722/2012 implementing certain aspects relating to the assignment of emissions allowances within the framework of Law 1/2005;
- c* several regulations on energy efficiency such as Royal Decree 235/2013 on the basic procedure for the energy efficiency certification of buildings; Royal Decree 163/2014 on the carbon footprint, offset and carbon dioxide absorption projects registry; Royal Decree 56/2016 on energy efficiency relating to energy audits, accreditation of providers of energy services and auditors, and promotion of the efficiency of energy supply; and
- d* several regulations on clean energy such as Royal Decree 413/2014 on the production of electricity from renewable energy sources, cogeneration and waste or Royal Decree 235/2018 establishing calculation methods and information requirements in relation to the intensity of greenhouse gas emissions from fuels and energy in transportation.

There is a National Action Plan on Renewable Energy Sources 2011–2020, which aims to achieve 20 per cent of the total energy consumption from renewable energy sources in 2020 (EU Directive 2009/28/EC).

## **VIII OUTLOOK AND CONCLUSIONS**

Spain is aligned with the rest of the European 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. Moreover, recently the Spanish government is taking steps towards a more intense environmental protection, namely by means of a prospective Law on Climate Change and Ecological Transition.



# TURKEY

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## I INTRODUCTION

Article 56 of the Constitution of the Republic of Turkey of 1982 (the Constitution of 1982)<sup>2</sup> identifies environmental protection and pollution avoidance as fundamental instruments for achieving policy goals aimed at protecting and enhancing human health and the right to live in a healthy environment. Article 56 requires the state and all of its citizens to comply with this framework.

The Environmental Law No. 2872 (the Environmental Law)<sup>3</sup> was enacted in 1983 and is the primary law addressing environmental issues. The Ministry of the Environment and Urbanisation (the Ministry) is the principal authority that oversees implementation of the Environmental Law, issues secondary legislation and regulates a broad range of activities that impact the environment.

Turkey accelerated its adoption of environmental legislation in the 1990s following its EU membership application submitted in 1987. In the early 2000s, Turkey started an ongoing trend of adapting environmental regulations and standards acknowledged by the European Union as part of the long-lasting accession talks that commenced in 2005. Turkey's regulatory standards have become more comprehensive and sophisticated in an effort to match the European Union in addition to the numerous bilateral and multilateral treaties ratified to address regional and global environmental issues. That being said, Turkey is also subject to domestic and international criticism owing to its struggle to balance environmental protection with economic development. Despite the comprehensive legislative foundation framing environmental protection, there is room for improvement on the implementation and enforcement front. Environmentalists have been known to criticise the frequency and quality of governmental audits and the many investor-friendly exceptions introduced in legislative framework over the years (e.g., certain infrastructure investments being carved out of secondary legislation that require an environmental impact assessment).

## II LEGISLATIVE FRAMEWORK

The Environmental Law, as the primary legislation governing environmental protection, sets forth the framework for environmental protection principles and the sanctions applicable to the violations of such principles. The secondary legislation sets forth detailed standards

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2 Published in the Official Gazette, dated 9 November 1982, No. 17863.

3 Published in the Official Gazette, dated 11 August 1983, No. 18132.

and obligations, and defines specific types of environment and pollutants affecting it (e.g., soil pollution, water pollution, noise pollution). The secondary legislation refers to the Environmental Law for sanctions applicable to non-compliance with such detailed standards.

The main objectives of the Environmental Law are to protect and improve the environment, to make better use of and preserve land and natural resources, and to prevent water, land and air pollution in order to foster the health, civilisation and living conditions of present and future generations.

The Environmental Law hinges on the 'polluter pays' principle and imposes liability on the polluter for all actions against the environment. A 'polluter' is defined as an individual or legal entity that directly or indirectly causes environmental pollution or deterioration of the ecological balance or otherwise disturbs the environment during or because of their activities.

Environmental polluters and those who inflict damage on the environment are liable for any damage arising from the pollution and destruction it may cause regardless of their degree of fault. The polluter is also required to pay compensation for the resulting damage in accordance with general tort liability.

All institutions and enterprises falling within the scope of the environmental legislation are obliged to establish, individually or collectively, waste treatment facilities or systems. The legislation imposes a responsibility on the institutions and enterprises to conduct waste treatment, avert and eliminate the harmful effects of all waste generated, and take any necessary precautions to prevent possible damage to the environment during operations.

The most significant pieces of secondary legislation are the Environmental Impact Assessment Regulation (the EIA Regulation)<sup>4</sup> and the Regulation on Environmental Permits and Licences (the Permit and Licence Regulation).<sup>5</sup>

The EIA Regulation details the environmental impact assessment procedure and requirements, obliging institutions and enterprises to mitigate their impact on the environment.

The Permit and Licence Regulation governs the issuance and terms of permits and licences. Pursuant to the Permit and Licence Regulation, companies must obtain an integrated environmental permit for the commissioning of their facilities, covering air, noise, wastewater and deep water emissions to the extent applicable.

Both the EIA Regulation and the Permit and Licence Regulation specifically list the type of facilities that fall within their scope together with the applicable exemptions.

Turkey also takes part in the global combat against greenhouse gas emissions and global warming. The Ministry introduced the National Climate Change Action Plan for the period between 2011 and 2023 in an effort to work towards global climate change-related objectives. For this reason, Turkish authorities have issued the Regulation on the Monitoring of Greenhouse Gas Emissions (the Regulation on Emissions Monitoring)<sup>6</sup> and the Regulation on the Reduction of Ozone Layer Depleting Substances<sup>7</sup> to address the monitoring, reporting and verification of greenhouse gas emissions from certain activities and facilities listed in the regulations. However, these regulations are merely focused on the monitoring of gas emissions for statistical purposes; they do not impose any actual preventive measures to reduce emissions. In the absence of such provisions, the current legal framework does not

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4 Published in the Official Gazette, dated 25 November 2014, No. 29186.

5 Published in the Official Gazette, dated 29 April 2009, No. 27214.

6 Published in the Official Gazette, dated 17 May 2014, No. 29003.

7 Published in the Official Gazette, dated 7 April 2017, No. 30031.

provide meaningful tools to fight climate change. Until the legislative background on climate change is amended to introduce a defined plan with incentives and meaningful sanctions, it is unrealistic to expect much change in the concerned parties' approach against climate change.

Turkey is a signatory to many multilateral conventions and agreements, along with many bilateral agreements. Turkey is, among others, party to the following international agreements, conventions and protocols concerning protection of the environment:

- a* air pollution: the Convention of Long-Range Transboundary Air Pollution;
- b* water pollution:
  - the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean;
  - the Convention on the Protection of the Black Sea Against Pollution; and
  - the International Convention for the Prevention of Pollution from Ships;
- c* chemicals, hazardous wastes and land contamination:
  - 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;
  - the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; and
  - the International Convention on Civil Liability for Oil Pollution Damage;
- d* climate change:
  - the United Nations Framework Convention on Climate Change (UNFCCC);
  - the Kyoto Protocol to the UNFCCC;<sup>8</sup>
  - the Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer; and
  - the Montreal Protocol on Substances that Deplete the Ozone Layer; and
- e* biodiversity:
  - the Cartagena Protocol on Biosafety to the Convention on Biological Diversity; and
  - the Convention on the Conservation of European Wildlife and Natural Habitats;

Under Turkish law, duly ratified international agreements and conventions carry the force of law in accordance with Article 90 of the Constitution of 1982.

### III THE REGULATORS

The Ministry is the principal authority for enforcing and overseeing the related legislation and introducing, amending, implementing and enforcing regulations related to the environment. Pursuant to Article 31 of the Environmental Law, regulations issued pursuant to the Environmental Law are to be drafted by the Ministry in consultation with other ministries when necessary.

The Ministry uses its authority with regard to environmental protection through certain boards and directorates. These boards and directorates supervise and audit the implementation of the EIA Regulation as well as permits and licences.

The main boards and directorates under the Ministry are as follows:

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<sup>8</sup> As Turkey is not among the Annex 2 signatories, Turkey's status under the Kyoto Protocol is limited to general undertakings without being bound with quantitative limitations on current emissions levels.

- a* High Council of Environment: this higher board is responsible for and authorised to, among others, designate missions, policies and strategies; adopt the necessary legal and administrative measures; and resolve disputes on environmental issues concerning more than one ministry or governmental institution by rendering a final decision.
- b* Regional Environmental Boards: these local boards are presided over by the governors of their respective cities or districts and are engaged in ensuring environmental protection and preventing pollution in their assigned area.
- c* General Directorate of Environmental Management: this general directorate focuses on providing opinions and drafting the necessary regulations; developing standards for preventing environmental pollution; promoting cleaner manufacturing and use of renewable energy resources; collaborating with the Turkish Atomic Energy Authority with regard to nuclear energy; and preparing, coordinating, and implementing national environmental strategies and guiding local environmental boards.
- d* General Directorate of Permit and Supervision for Environmental Impact Assessment: this general directorate focuses on, among others, handling strategic EIA work and taking necessary measures within such context; providing permits and licences, if necessary; monitoring facilities and motor vehicles, emissions, waste treatment systems, etc., that contribute to environment pollution; and establishing laboratories to make any analyses required to monitor the environment and pollutants.
- e* General Directorate of Protection of Natural Heritage: this directorate is responsible for conducting the necessary work for the management of national parks, preparation of zoning plans with regard to such areas and the designation of principles for protection with regard to conflicted heritage areas where natural heritage, archaeological and urban areas overlap with other protected areas.

## IV ENFORCEMENT

In general, Turkish law prescribes the following measures against pollution.

### **i Preventive action**

As per Article 30 of the Environmental Law, anyone who has been harmed by or has become aware of any action that pollutes the environment has the right to apply to the administrative or judicial authorities for preventive measures, including ceasing the responsible activities. The claimant can apply to the regional units of the Ministry or to the administrative court against any action by private persons or administrative bodies. As opposed to the general administrative compensation and cancellation lawsuits described under the Administrative Procedural Law No. 2577,<sup>9</sup> the claimant does not have to establish a legitimate interest to make a claim for the prevention of pollution. Both the Ministry and the courts are authorised to suspend operations of the polluter. The enforcement regime under the Environmental Law echoes the principle of Article 56 of the Constitution of 1982: everyone has the right to live in a healthy and balanced environment.

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<sup>9</sup> Published in the Official Gazette, dated 20 January 1982, No. 17580.

## **ii Civil Liability**

The Environmental Law's liability regime adopts the 'polluter pays' principle. In principle, all costs in relation to preventing, limiting and diminishing pollution are to be borne by the polluter and all necessary expenditures made by public authorities or agencies for preventing pollution are collected from the polluter in accordance with the provisions of the Law Regarding Collection of Public Receivables No. 6183 (the Public Receivables Law).<sup>10</sup> As per Article 28 of the Environmental Law, the polluter is liable irrespective of whether it was at fault and regardless of the severity of its fault. Further, the liability extends to damages incurred from the pollution as well as the expenses for recovery and rehabilitation of the polluted area. The polluter will also be required to indemnify any claims by affected parties in accordance with the general torts liability regime under Turkish law. There is a five year statute of limitations that is triggered once the affected party becomes aware of the polluting activity or pollution.

## **iii Administrative fines**

Article 20 of the Environmental Law sets forth various administrative fines<sup>11</sup> to be imposed on polluters, including, among others, those who establish or operate facilities subject to permits without obtaining authorisation from the competent authorities, those who continue to operate despite the cancellation of their permit, those who modify a permitted facility without permission and those who fail to make the necessary changes required by competent authorities.

If the action that led to a fine under the Environmental Law is repeated by the violating party within three years, the amount of the fine to be imposed will be multiplied by two for the first re-occurrence and multiplied by three for the second and following re-occurrences.

The Misdemeanour Law No. 5326<sup>12</sup> sets forth the various administrative fines to be imposed by municipal police officers. Fines will be imposed under the said law on persons that cause noise pollution and those who dispose waste to places other than designated waste collection or storage areas. The cost for removal of such waste is also charged to the polluter.

## **iv Criminal Liability**

Under the Criminal Code No. 5237 (the Criminal Code)<sup>13</sup> (Articles 181, 182, 183 and 184), intentionally polluting the environment through discharge or disposal of waste into the soil, water or air in violation of applicable procedures constitutes a crime. Offenders may be punished by imprisonment from six months to two years if such action is proven to have resulted in environmental pollution, regardless of the materiality of its environmental impact.

If the above offence causes permanent damage to the environment, the penalty will be doubled. If it is committed by negligence, the penalty would be from two months to one year.

As per the Coastal Law No. 3621,<sup>14</sup> those who dispose harmful material such as debris, soil or rubbish to the shore or to coastal strips designated in the zoning plan will be fined

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10 Published in the Official Gazette, dated 28 July 1953, No. 8469.

11 The amounts of administrative monetary fines are updated each year.

12 Published in the Official Gazette, dated 31 March 2005, No. 25772.

13 Published in the Official Gazette, dated 12 October 2004, No. 25611.

14 Published in the Official Gazette, dated 17 April 1990, No. 20495.

in accordance with the provisions of the Criminal Code, the Environmental Law and the Misdemeanour Law. If these acts result in disrupting the coastal environment or placement of obstacles to accessing the coast, a penalty from six months to two years will apply.

## **V REPORTING AND DISCLOSURE**

Under Turkish legislation, there is no general reporting obligation for permit or regulation violations or for climate change; however, specific regulations mandate certain reporting requirements. For example, pursuant to the Regulation on the Control of Water Pollution,<sup>15</sup> those who do not have a treatment facility fail to meet effluent standards during operations, increase processing capacity, or those who stop activities temporarily or permanently are obliged to immediately inform the relevant administration.

As mentioned under Section II, the EIA Regulation focuses on the environmental impact assessment procedure and requirements. Accordingly, if the proposed activities of an entity have the potential to adversely impact the environment, the investor must obtain either an 'EIA Positive Decision' or an 'EIA Not Required Decision' from the Ministry. For more significant activities falling within the scope of Annex I of the EIA Regulation, an EIA report must be prepared and submitted to the Ministry for approval. The Ministry will then decide whether the relevant facility's impact on the environment is acceptable within the framework of the applicable legislation. For activities within the scope of Annex II of the EIA Regulation (projects subject to election and assessment criteria), an EIA presentation file must be submitted to the Ministry or the relevant authority, who will then assess whether preparation of an EIA report is required for the specific project. If an EIA procedure is not required, the applicant may directly commence its activities. Failure to satisfy the EIA requirement prior to commencement of a qualifying activity may lead to temporary or permanent suspension of the relevant activity and reinstatement of the project site as well as an administrative fine amounting to 2 per cent of the investment value of the facility.

There is no general disclosure requirement for potential environmental liability to prospective purchasers and in financial statements or reports.

## **VI ENVIRONMENTAL PROTECTION**

### **i Air quality**

The Environmental Law sets out the framework principles for the preservation of air quality. Specifics thereof are governed by various regulations enacted based on the Environmental Law.

The Regulation on the Assessment and Management of Air Quality<sup>16</sup> is based on EU Directives 96/62/EC, 99/30/EC, 2000/69/EC, 2002/3/EC and 2004/107/EC, establishing the main principles and procedures for the preservation of air quality.

The Regulation on the Control of Air Pollution from Heating Sources<sup>17</sup> and the Regulation on the Control of Industrial Air Pollution<sup>18</sup> are sector-specific regulations governing air pollution with a focus on the activity it originates from.

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15 Published in the Official Gazette, dated 31 December 2004, No. 25687.

16 Published in the Official Gazette, dated 6 June 2008, No. 26898.

17 Published in the Official Gazette, dated 13 January 2005, No. 25699.

18 Published in the Official Gazette, dated 3 July 2009, No. 27277.

The Regulation on the Control of Industrial Air Pollution sets forth the principles for the control of soot, smoke, dust, gas, steam and aerosol emissions as a result of industrial and energy production. Environmental permits are mandatory for the establishment and operation of enterprises with air emissions and are issued subject to the Permit and Licence Regulation.

The Regulation on the Control of Air Pollution from Heating Sources specifies the substances that can be used for heating purposes and prohibits the use of certain scrap materials, including petroleum coke, mineral oil, plastic car parts, rubber, sawdust, solid waste, scrap textile, cables, wet wood, painted wood, plastic, household goods, food waste, medical waste, asphalt and asphalt products, paint and paint products, or fuel-oil containers to minimise air pollution.

See Section II for details on the environmental permits and licences required under the Permit and Licence Regulation.

As explained in detail under Section IV, a fine may also be imposed on the operator of a facility if a facility that is subject to permits under the air pollution legislation fails to comply with the terms of the permits or regulations or if the facility generates emissions in excess of the applicable emissions standards and limitations set out in the relevant regulations.

## **ii Water quality**

The Regulation on the Water Pollution Control sets forth the main principles for preserving water quality and preventing water pollution. In this regard, all kinds of pollutants are required to take permits for water pollution control.

It is forbidden to dispose wastewater in the receiving medium without any purification treatment and without ensuring that the quality standards determined for the environment in which the treated wastewater will be discharged in are not adversely affected.

Facilities that discharge waste into sewage systems should also obtain a wastewater connection permit. See Section II for details on the environment permits and licences required as per the Permit and Licence Regulation.

Further, if a facility has dangerous substances in its waste water, it must obtain a dangerous waste storage permit from the Ministry in accordance with the Regulation on the General Principles of Waste Management and the Regulation on the Control of Pollution Caused by Dangerous Substances in Aquatic Environments. Such waste must be collected from the permitted facility every six months by a licensed storage entity.

## **iii Chemicals**

Aside from the Environmental Law, the Regulation on the Classification, Labelling, and Packaging of Materials and Mixtures (the CLP Regulation)<sup>19</sup> and the Regulation on the Recording, Evaluating, Permission and Limitation of Chemicals (the Permission Regulation)<sup>20</sup> set up the legal framework governing the environmental implications of chemicals.

The Permission Regulation promotes alternative methods for the assessment of hazardous substances while enhancing competitiveness and innovation to protect human health and the environment. Accordingly, all manufacturers, importers and downstream users are responsible for ensuring that the production, market placement and use of the

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19 Published in the Official Gazette, dated 11 December 2013, No. 28848.

20 Published in the Official Gazette, dated 23 June 2017, No. 30105.

chemical substance does not cause any negative effect on human health or the environment. It obliges the manufacturers and importers handling substances in quantities of one ton or more per year to submit a registration to the Ministry by using the online Chemical Registration System. Within three weeks of submitting their registration, applicants may start or continue manufacturing or importing the relevant substance unless otherwise indicated by the Ministry.

The Permission Regulation further requires that a substance listed under the annexes of the regulation not be manufactured, placed on the market or used unless it complies with the conditions of the restriction.

As per the CLP Regulation, a material or a mixture cannot be introduced to the market unless it is classified, labelled and packaged in accordance with the potential physical damage or harm threat it poses to human health and the environment. Manufacturers, importers, downstream users and product manufacturers are liable with respect to the classification of materials or mixtures. The label of a material or mixture that is classified as hazardous should contain certain information such as the suppliers' details, and satisfy certain form requirements (e.g., legible, non-erasable).

Where the hazard class of the material or mixture changes, leading to more significant threats requiring additional information to be placed on the label, the supplier should update the label without delay. Except for such changes that require immediate amendment to the labels, suppliers should update the labels within 18 months in case of a change.

The CLP Regulation further stipulates that suppliers should collect all of the information they use during classification and labelling and keep this information for 10 years starting from the last day of supply. Upon request, the supplier will be under the obligation to provide such information to the Ministry.

The Regulation on Persistent Organic Pollutants recently entered into force. This new regulation aims to prohibit production, market placement and use of certain persistent organic pollutants, and covers the provisions in order to minimise and manage waste containing or contaminated by any of these substances.

As per the Environmental Law, all parties involved in the handling of hazardous chemicals (i.e., manufacturing, sale, storage, use and transportation) are jointly liable in connection with any damage inflicted by the release of such chemicals. Further, each of these parties should obtain liability insurance for any possible harm to be caused to third parties during their professional activities.

Pursuant to Article 20 of the Environmental Law, a fine is applicable to the processing, importing, exporting, transporting, storing, packaging, labelling and sale of dangerous chemicals and substances containing hazardous chemicals in breach of the principles and procedures set forth under the relevant regulations. The amount of the fine is tripled for individuals.

#### **iv Solid and hazardous waste**

The Regulation on Waste Management (the Waste Management Regulation)<sup>21</sup> is the centrepiece of secondary legislation outlining principles related to the management of waste from the production stage to disposal without harming the environment or human health in order to improve the overall use of natural resources by way of re-use, recycle and recovery.

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21 Published in the Official Gazette, dated 2 April 2015, No. 29314.



As per the Waste Management Regulation, facilities that produce more than 1,000 kilograms of hazardous waste per month are required to obtain a temporary storage permit. If the production of hazardous waste is less than 1,000 kilograms per month, these facilities should still apply to the Ministry to obtain an exemption. In terms of timing limitations, hazardous waste may only be stored for up to six months, whereas this limit is one year for non-hazardous waste.

Facilities that engage in the collection, transportation, storage, recycling and temporary storage of hazardous waste, regardless of the amount of the hazardous waste processed, are obliged to purchase a liability insurance policy to provide coverage for damages that may be inflicted on third parties during these activities.

The Regulation does not address particular types of waste. Different types of waste are governed under specific secondary legislation, such as those pertaining to the disposal of medical, packaging and mining waste.

## **v Contaminated land**

The Law on Soil Preservation and Land Utilisation No. 5403 (the Land Utilisation Law)<sup>22</sup> has the purpose of determining soil and land classification, land utilisation, and land and soil preservation. The Land Utilisation Law prohibits the use of agricultural lands for other purposes and introduces measures to ensure the protection and sustainable use of soil. Soil preservation boards are established in each province to oversee that land use is in compliance with the Land Utilisation Law.

The Regulation on the Control of Soil Pollution and Sites Contaminated by Point Source Pollution (the Soil Pollution Regulation)<sup>23</sup> is the main secondary legislation regarding the prevention of soil pollution. Pursuant to the Soil Pollution Regulation, facilities that use, store or produce hazardous waste should take the necessary measures to prevent soil pollution and should notify the authorities prior to commencement of such activities. In principle, the priority is to prevent soil pollution at the source. Direct or indirect storage and discharge of hazardous material and waste to soil is prohibited, and contaminated soil should not be mixed with clean soil.

In the case of failure to comply with these provisions addressing soil pollution, the prevention, remedy and compensation regime under the Environmental Law will apply (see Section IV).

## **VII CLIMATE CHANGE**

Turkey is not bound by the greenhouse gas emission limitations under the Kyoto Protocol. Nevertheless, Turkey has taken various actions and implemented a series of legislative modifications to reduce green gas emissions and increase the use of clean and renewable energy resources in various activities, such as manufacturing, heating, waste and transport.

The Ministry has introduced a national climate change action plan for the period between 2011 and 2023, taking into account the UNFCCC, Kyoto Protocol, Bali Action Plan and other sources of international consensus in the area of climate change. In terms of legislative framework, the Regulation on Emissions Monitoring introduces procedures

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22 Published in the Official Gazette, dated 19 July 2005, No.25880.

23 Published in the Official Gazette, dated 8 June 2010, No. 27605.

for the monitoring, verification and reporting of greenhouse gas emission, and introduces certain concepts such as greenhouse gas emissions, greenhouse gas emission reports and verification entity. Businesses generating greenhouse gas must monitor their emissions levels in accordance with the monitoring plans prepared by the business operator and approved by the Ministry.

The Ministry has also issued the Communiqué on Greenhouse Gas Emissions Monitoring and Reporting<sup>24</sup> for the implementation of the Regulation on Emissions Monitoring, which describes detailed procedures and principles governing the monitoring and reporting of greenhouse gas emissions.

The Regulation on the Reduction of Ozone Layer Depleting Substances also plays an important role in the fight against climate change. The purpose of this Regulation is to determine the general procedures and principles regarding the use and reduction of substances controlled by the Montreal Protocol on Ozone Layer Depleting Substances, to which Turkey is a party. Finally, the Energy Efficiency Law No. 5627<sup>25</sup> governs the principles for the promotion of renewable energy, and the development and implementation of energy efficiency.

## **VIII OUTLOOK AND CONCLUSIONS**

While Turkey does not rank among the top performers in dealing with environmental issues, it continues to show an effort to adopt environmental regulations and standards acknowledged by the European Union. Several draft regulations were recently announced by the Ministry, such as the Zero Waste Regulation, the Integrated Pollution Prevention and Control Regulation, the Regulation on the Storage of Wastes, the Regulation on the Control of Water Pollution, and the Regulation on the Classification, Labelling and Packaging of Substances and Mixtures. While still in draft form, these regulations are expected to strengthen the criteria for environmental protection obligations of all responsible parties. Further, a bill has been submitted to Parliament providing heavier fines for non-compliance with the Environmental Law. As of 1 January 2019, Turkey has banned the use of free plastic bags at retail stores.

Turkey became a signatory to the Paris Agreement on 22 April 2016, which is focused on strengthening and coordinating the global response to climate change. Its ratification is pending by the Turkish government, as Turkey requests financial and technological support as well as an exemption from the absolute emission reductions under the agreement. Turkey also does not have a carbon tax or emissions trading scheme in place and has been criticised for encouraging the use of coal in energy generation.

While the legislative framework for monitoring the effects of climate change is present, there is still much room for improvement in terms of the governing rules, principles and consequences of non-adherence to the legislation. For the legislation to serve as a meaningful tool to fight against climate change, Turkey should quickly take the necessary steps to ensure an increased awareness in stakeholders.

It cannot be denied that Turkey has learned valuable lessons from past environmental disasters attributable to unplanned and uncontrolled development. However, to be better equipped for the future and steer its development towards sustainability, Turkey must take

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24 Published in the Official Gazette, dated 22 July 2014, No. 29068.

25 Published in the Official Gazette, dated 2 May 2007, No. 26510.

a closer look at its shortcomings and prepare with better coordination and planning. In the short run, Turkey will remain a developing country that is expected to prioritise rapid development over environmental protection and focus on the use of conventional energy sources over renewables.

# UNITED KINGDOM

*Tallat S Hussain*<sup>1</sup>

## I INTRODUCTION

This review outlines the legislation and regulatory regimes in the United Kingdom related to the environment and climate change. It is primarily focused on the laws of England and Wales, with reference to Scotland and Northern Ireland where appropriate.

The United Kingdom is involved in several major environmental and climate change initiatives at the national, EU, regional and international levels (such as its participation in the EU emissions trading scheme (EU ETS)<sup>2</sup> and the Paris Agreement under the United Nations Framework Convention on Climate Change),<sup>3</sup> as well as various decarbonisation initiatives (discussed below). The United Kingdom's upcoming exit from the European Union (Brexit) is not expected to impact on these initiatives in the short term. However, depending on the form of Brexit adopted, the UK government may be required to replace certain environmental safeguards that are derived from EU law.

At the 2017 United Nations Environment Assembly in Nairobi, the United Kingdom, together with other UN Member States, signed a resolution to tackle the issue of plastic litter in the oceans.<sup>4</sup> The UK government has since taken a number of steps to reduce plastic waste, including passing landmark legislation to ban the manufacture of cosmetic products containing microbeads,<sup>5</sup> and establishing the Commonwealth Clean Oceans Alliance Initiative to eliminate single use plastic and address marine plastic pollution.<sup>6</sup> In the autumn 2018 budget, the Chancellor announced that a new tax will apply from 1 April 2022 to plastic packaging that does not include at least 30 per cent recycled content.<sup>7</sup> The government

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1 Tallat S Hussain is environmental counsel at White & Case LLP. The author was assisted by Alex Field and Samantha Sutton, associates at White & Case LLP.

2 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (Text with EEA relevance); [http://ec.europa.eu/clima/policies/ets\\_en](http://ec.europa.eu/clima/policies/ets_en).

3 The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) was adopted on 12 December 2015 and entered into force on 4 November 2016; [http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php).

4 <https://www.gov.uk/government/news/global-commitment-at-united-nations-assembly-to-reduce-pollution>.

5 Environmental Protection (Microbeads) (England) Regulations 2017.

6 <https://www.gov.uk/government/news/commonwealth-unites-to-end-scurge-of-plastic>.

7 Treasury, 2018 Budget, p. 48. See [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/752202/Budget\\_2018\\_red\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752202/Budget_2018_red_web.pdf).

also carried out reviews of environmental regulations within the waste and recycling sector and the energy sector to limit bureaucracy and reduce costs, with the results of both published in March 2016.<sup>8</sup>

Additionally, the UK environmental permitting regime was the subject of an ongoing review to consolidate the various amendments made since its introduction in 2010.<sup>9</sup> The Environmental Permitting Regulation 2016 came into force on 1 January 2017, and consolidated the 15 amendments made to the 2010 regulations. The duties under the regulations broadly remain unchanged.

Actions relating to air quality issues include the government's development of a new Clean Air Zone framework, which will simplify the current overlapping regimes and provide local authorities with new legal powers to reduce pollution through the implementation of local Clean Air Zones. The government has directed 28 local authorities to produce accelerated local plans to reduce nitrogen dioxide (NO<sub>2</sub>) levels, including benchmarking proposals against a possible Clean Air Zone where appropriate. The government is also working with a further 33 local authorities which have shorter-term NO<sub>2</sub> exceedances to assess if there are measures to bring forward the point at which they can comply with the NO<sub>2</sub> concentration limits.<sup>10</sup>

With the launch of the Green Investment Bank (GIB) in 2012, the United Kingdom was the first country in the world to create a bank dedicated to the green economy.<sup>11</sup> By March 2016 the government had begun the process of privatising GIB,<sup>12</sup> and on 18 August 2017, the government announced that it had sold GIB (now Green Investment Group) to Macquarie Group Limited in a £2.3 billion deal. To safeguard GIB's environmental mission, part of the deal has involved a 'special share' in GIB being held by five independent trustees who have the power to approve or reject any proposed change to GIB's green focus.<sup>13</sup>

Certain UK initiatives have been less successful. For instance, the government withdrew funding from the £1 billion Carbon Capture and Storage (CCS) Commercialisation Competition in 2015. This affected the White Rose Carbon Capture Storage project, one of the two bidders brought forward to the planning and design stage, casting doubt on the future financing of carbon capture and storage projects in the United Kingdom.<sup>14</sup> CCS in the United Kingdom has not recovered from this.

## II LEGISLATIVE FRAMEWORK

The current legislative framework for environmental and climate change regulation in the United Kingdom is composed of a mixture of domestic and EU law. In many areas, UK environmental regulation derives primarily from the European Union, as the government

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8 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/504777/bis-16-154-crt-review-waste.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/504777/bis-16-154-crt-review-waste.pdf); [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/504797/bis-16-158-crt-review-energy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/504797/bis-16-158-crt-review-energy.pdf).

9 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/484024/epr-consolidation-consult-sum-resp.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/484024/epr-consolidation-consult-sum-resp.pdf).

10 Draft Clean Air Strategy, pp. 74–76.

11 [www.greeninvestmentbank.com/](http://www.greeninvestmentbank.com/).

12 <http://greeninvestmentgroup.com/news-and-insights/2016/uk-green-investment-bank-privatisation-process-to-launch/>.

13 <https://www.gov.uk/government/speeches/sale-of-green-investment-bank>.

14 [www.publications.parliament.uk/pa/cm201516/cmselect/cmenergy/692/692.pdf](http://www.publications.parliament.uk/pa/cm201516/cmselect/cmenergy/692/692.pdf).

has identified that over 1,100 pieces of directly applicable EU legislation are ‘owned by the Department of Environment, Food & Rural Affairs’.<sup>15</sup> However, the United Kingdom has long had its own environmental laws, and the regimes for certain important areas such as contaminated land are solely domestic.

EU environmental law will continue to apply for as long as the United Kingdom is a part of the European Union, and likely, at least initially, following Brexit. However, depending on the form of new trading arrangements agreed between the United Kingdom and the European Union, some of this legislation may be impacted, even though the United Kingdom has adopted most EU environmental directives into national law. As discussed below, the European Union (Withdrawal) Act 2018 (the EU Withdrawal Act), which became law by Royal Assent on 26 June 2018, enables the incorporation of existing EU law into domestic legislation up to the point that Britain exits from the European Union. As stated in its 25 Year Environment Plan, the government intends to deliver a ‘Green Brexit’ by using Britain’s exit from the United Kingdom as an opportunity to assess the state of the environment and reform certain policies such as agriculture and fisheries management.<sup>16</sup> The Environmental Principles and Governance Bill (discussed further below) will take steps to safeguard environmental protections in the United Kingdom, including the creation of an independent environmental body to hold the government to account.<sup>17</sup>

Certain regimes that implement EU legislation may need to be rewritten to incorporate the standards directly into UK law. For example, the UK regime for regulating industrial emissions as currently written refers to compliance with the EU Industrial Emissions Directive (IED),<sup>18</sup> as opposed to referring to standards contained within UK legislation. The government is in the process of introducing secondary legislation under the EU Withdrawal Act to ensure that domestic legislation implementing the IED can continue to operate after Brexit.<sup>19</sup> The United Kingdom will continue to be bound by any international treaties or conventions to which it is a party in its own right alongside the European Union, such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, even if it is no longer bound by any EU legislation implementing the results of those treaties.

Much of UK environmental legislation is specific to a particular area of environmental law. Some examples of important legislation, discussed in greater depth below, include:

- a* the Environmental Permitting Regulations 2010, which set out the environmental permitting system;
- b* the Environmental Protection Act 1990, which regulates contaminated land and waste;
- c* the Environment Act 1995, which regulates ambient air quality;
- d* the Industrial Emissions Directive 2010, which regulates industrial emissions;
- e* the Water Resources Act 1991, which regulates discharges to water;
- f* the Water Industry Act 1991, which regulates discharges to sewers;

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15 <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/eu-energy-and-environment-subcommittee/brexit-environment-and-climate-change/written/45974.pdf>.

16 Department for Environment, Food and Rural Affairs 11 January 2018: Policy Paper (Gov’t Publication): A Green Future: Our 25 Year Plan to Improve the Environment, p. 9; 36; 139.

17 <https://www.gov.uk/government/news/new-environment-law-to-deliver-a-green-brexit>.

18 Industrial Emissions Directive 2010/75/EU.

19 <https://www.gov.uk/government/publications/industrial-emissions-standards-best-available-techniques-if-theres-no-brexit-deal/industrial-emissions-standards-best-available-techniques-if-theres-no-brexit-deal>.

- g* the REACH Enforcement Regulations 2008, which regulate chemicals;
- b* the Waste Regulations 2011 and Hazardous Waste Regulations 2005, which regulate solid and hazardous waste;
- i* the Waste Enforcement (England and Wales) Regulations 2018; and
- j* the Climate Change Act 2008, which sets legally binding targets for emissions reduction.

### III THE REGULATORS

The primary regulatory agencies enforcing environmental and climate change rules in the different areas of the United Kingdom are:

- a* the Environment Agency (EA) in England;<sup>20</sup>
- b* Natural Resources Wales in Wales;<sup>21</sup>
- c* the Scottish Environment Protection Agency (SEPA) in Scotland;<sup>22</sup> and
- d* the Northern Ireland Environment Agency (NIEA) in Northern Ireland.<sup>23</sup>

These agencies are responsible for the regulation of major industry and waste management, the treatment of contaminated land, water quality and natural resources. They also regulate fisheries, navigation of harbours, estuaries and inland rivers, and are responsible for managing flood risks and issues of conservation and ecology.<sup>24</sup>

Numerous other bodies also play a role, including:

- a* the Department for Environment, Food and Rural Affairs (Defra), the central government department responsible for environmental protection policy in England and internationally on behalf of the United Kingdom in the European Union and elsewhere;
- b* the Department for Business, Energy and Industrial Strategy, the central government department responsible for climate change having taken over the functions of the former Departments for Energy and Climate Change and for Business, Industry and Skills;
- c* the Scottish government, Welsh government and Northern Irish Executive, which each have devolved responsibilities for environmental policy and legislation in their respective countries;
- d* Natural England, which has responsibility for biodiversity, wildlife and habitats in England;
- e* the Marine Management Organisation, with responsibility for marine activities and the marine environment throughout the United Kingdom; and
- f* the Health and Safety Executive, whose remit includes industrial safety, chemicals and asbestos management.

The regulatory agencies are overseen by their respective government body, for example, Defra in England or the devolved governments in Wales, Scotland and Northern Ireland.

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<sup>20</sup> <https://www.gov.uk/government/organisations/environment-agency>.

<sup>21</sup> <https://naturalresources.wales/>.

<sup>22</sup> <https://www.sepa.org.uk/>.

<sup>23</sup> <https://www.daera-ni.gov.uk/>.

<sup>24</sup> The NIEA is also responsible for the preservation of the built environment in Northern Ireland, fulfilling a similar role to organisations such as English Heritage.

Certain environmental responsibilities are within the remit of local authorities, including the collection and disposal of municipal waste and the regulation of emissions from smaller industrial plants within their local area to air, water and land. Notably, local authorities play a key role in relation to contaminated land, as laid out under Part IIA of the Environmental Protection Act 1990,<sup>25</sup> except where the land is a 'special site' regulated by the EA or its equivalent. Special sites include, but are not limited to, sites that have a serious impact on controlled waters or sites contaminated by radioactivity.<sup>26</sup>

Courts in the United Kingdom play a key role in the enforcement of environmental regulation, serving as the venue for criminal prosecutions and civil actions to which they have generally adopted a robust approach. For instance, in *Lungowe v. Vedanta Resources plc*,<sup>27</sup> the courts were willing to allow Zambian citizens to bring claims against an English parent company for personal injury and damage to property allegedly caused by pollution from a copper mine owned by a Zambian subsidiary. The following year, when the company launched a jurisdictional challenge, the Court of Appeal upheld the lower court's decision following the effect of the European Court of Justice decision in *Owusu v. Jackson* and reinforcing the responsibility of a parent company for the operation of its subsidiary. The case may continue to develop, in light of the Supreme Court's decision on 23 March 2018 to grant permission for an appeal.<sup>28</sup> The case follows the earlier example of *Chandler v. Cape plc*,<sup>29</sup> which upheld the decision of the first instance judge to allow the employees of a subsidiary to bring a claim in negligence against the parent company regarding their exposure to asbestos.<sup>30</sup> In this case, the courts maintained that the UK parent company had a duty of care to employees of a subsidiary where the parent possesses higher knowledge of the source of the injury (in this case, asbestosis, for which the company had established environmental, health and safety (EHS) policies, especially in respect of asbestosis, and also disseminated EHS procedures to subsidiaries).

Environmental groups and other non-government organisations (NGOs) have also made use of the courts as a means of influencing environmental law and policy, both by bringing claims for judicial review against the actions of public authorities and by seeking to stop the activities of large companies where these may be detrimental to the environment. For example, ClientEarth has engaged in a series of challenges against the government's air quality plans, forcing new plans to be produced in 2015<sup>31</sup> and for the reconsideration of these plans in 2016.<sup>32</sup> Most recently, in a judgment handed down on 23 February 2018, the High Court found that the third iteration of the government's plans, the 2017 Air Quality

25 Environmental Protection Act 1990 c. 43.

26 Contaminated Land (England) Regulations 2006/1380, Regulation 2.

27 *Lungowe v. Vedanta Resources plc* [2016] EWHC 975 (TCC).

28 Supreme Court, Permission to Appeal Results – March and April 2018. See <https://www.supremecourt.uk/docs/permission-to-appeal-2018-0304.pdf>.

29 *Chandler v. Cape plc* [2012] EWCA Civ 525.

30 *Lungowe v. Vedanta Resources plc* [2017] EWCA Civ 1528.

31 *R (ClientEarth) v. The Secretary of State for the Environment, Food and Rural Affairs* [2015] UKSC 28.

32 *ClientEarth v. The Secretary of State for the Environment, Food and Rural Affairs* [2015] EWHC 2740 (Admin).



Plan, was unlawful in several respects, and that more action was needed in 45 local authority areas.<sup>33</sup> The government's most recent plan is the draft Clean Air Strategy 2018, as discussed further below.

Other NGOs have contested the granting of planning permission, such as the legal challenge by Friends of the Earth and Frack Free Ryedale in 2016 against the granting of permission for hydraulic fracturing for shale gas in Ryedale, North Yorkshire. However, their claim for judicial review was dismissed.<sup>34</sup>

The United Kingdom is also subject to the jurisdiction of the EU courts, and as such the European Court of Justice also plays a role in enforcing environmental legislation. For example, in the *Welsh NO<sub>x</sub>* case<sup>35</sup> the United Kingdom was held to have failed to correctly apply the provisions of the Large Combustion Plant Directive<sup>36</sup> to the Aberthaw Power Station in Wales by allowing the power station to burn highly volatile fuels resulting in emissions of nitrous oxides (NO<sub>x</sub>) above the levels permitted, although Aberthaw already benefited from a derogation allowing higher NO<sub>x</sub> emissions than usual for a power station of its type.

## IV ENFORCEMENT

There are various bases for environmental liability in the United Kingdom, including criminal law, civil law, public law and company law.

### i Criminal law

The primary method of enforcement for most environmental laws is criminal prosecution by the regulator (e.g., the Environment Agency in England and Wales) for breach of environmental legislation. Sanctions include fines and imprisonment, and extend liability to corporate entities as well as individuals. Prior to 12 March 2015, the maximum fine in the lower courts for environmental offences was £50,000. As a result of the Legal Aid, Sentencing and Punishment of Offenders Act 2012,<sup>37</sup> the maximum fines for environmental offences in the lower court are unlimited.<sup>38</sup>

Sentencing guidelines for environmental crimes published in 2014 have established increasing starting points for sentences based on the size of the company at fault, from micro companies to small, medium and large companies.

These guidelines were first applied in the case of *R v. Thames Water Utilities Ltd.*<sup>39</sup> Following criminal prosecution by the Environment Agency, Thames Water was fined £250,000 for the negligent discharge of untreated sewage into a stream that flowed through an Area of Outstanding Natural Beauty. This fine was upheld on appeal, with the court stating

33 *ClientEarth (No. 3) v. The Secretary of State for the Environment, Food and Rural Affairs, the Secretary of State for Transport and Welsh Ministers* [2018] EWHC 315 (Admin).

34 *R (Friends of the Earth Limited) v. North Yorkshire County Council* [2016] EWHC 3303 (Admin).

35 *Commission v. United Kingdom* [2017] Env LR 6.

36 Large Combustion Plant Directive 2001/80/EC. Superseded by the Industrial Emissions Directive on 1 January 2016.

37 Legal Aid, Sentencing and Punishment of Offenders Act 2012 c. 10, Section 85.

38 Magistrates' powers to impose imprisonment are specified by Section 78 PCC(S)A and Section 133 Magistrates' Courts Act 1980 (MCA): six months for one offence or 12 months for two.

39 *R v. Thames Water Utilities Limited* [2015] EWCA Crim 960.

that it 'would have had no hesitation in upholding a very substantially higher fine'.<sup>40</sup> The court compared the guidelines to those in relation to breaches of financial services regulation, holding that fines for harm caused by deliberate action or inaction could be imposed up to a 'substantial percentage' (i.e., up to and including 100 per cent) of a company's pre-tax net profit for the year. In general, the approach of the guidelines is for a repeated negligent offender to receive a fine large enough to 'bring the message home' to the directors and shareholders of the offending company.<sup>41</sup> Additionally, it was noted in the Court of Appeal case of *R v. Ineos Chlorvinyls Ltd* that when the court is determining an appropriate fine, the judge may take into account the resources of any linked organisation available to that particular offender.<sup>42</sup> In March 2017, when Thames Water committed a further breach of the Environmental Permitting Regulations on six counts, it was fined £20 million by the Crown Court.<sup>43</sup> The Water Services Regulation Authority (Ofwat) has since conducted an investigation into Thames Water's non-compliance with its leakage reduction obligations, resulting in Thames Water agreeing to pay £65 million back to customers as part of a package of payments and penalties amounting to £120 million.<sup>44</sup>

Other recent cases have resulted in more significant sentences than historically. These have included: a £3 million fine for Tesco Stores Ltd for a petrol leakage from a filling station into the local sewerage system, the Langwood Brook and the River Irwell, causing environmental damage and requiring local homes to be evacuated;<sup>45</sup> a £1 million fine for Thames Water for polluting the Grand Union Canal;<sup>46</sup> a £1.1 million fine for Yorkshire Water for illegally discharging sewage into the River Ouse;<sup>47</sup> and a combined fine of almost £1 million for United Utilities Water Limited and its contractor KMI+ for polluting a stream with bleach.<sup>48</sup> A record custodial sentence for an environmental crime – seven years and six months – has also recently been awarded in relation to a £2.2 million fraud by a waste operator that falsely claimed to have collected and recycled significant quantities of household electrical waste.<sup>49</sup>

40 *ibid.* Mitting J at para. 46

41 *ibid.* Mitting J at paras. 38–42.

42 McCombe LJ at para. 20, *R v. Ineos Chlorvinyls Ltd* [2017] Env LR 7(2016).

43 [https://uk.practicallaw.thomsonreuters.com/w-007-0800?originationContext=document&transitionType=DocumentItem&contextData=\(sc.Default\)&navId=BD03341A622FC919A09067153F49E83B&comp=pluk](https://uk.practicallaw.thomsonreuters.com/w-007-0800?originationContext=document&transitionType=DocumentItem&contextData=(sc.Default)&navId=BD03341A622FC919A09067153F49E83B&comp=pluk).

44 <https://www.ofwat.gov.uk/pn-22-18-thames-waters-failure-tackle-leakage-results-65m-package-customers/>.

45 <https://www.gov.uk/government/news/tesco-hit-with-major-8million-fine-for-pollution-incident>. Tesco Stores Ltd were also required to pay a further £5 million fine for a health and safety offence in relation to the same incident.

46 <https://www.gov.uk/government/news/thames-water-fined-1-million-for-pollution-to-grand-union-canal>.

47 <https://www.gov.uk/government/news/yorkshire-water-fined-1.1million-for-illegal-sewage-discharge>.

48 <https://www.gov.uk/government/news/united-utilities-and-contractors-fined-almost-1m-for-polluting-brook-with-corrosive-bleach>.

49 <https://www.gov.uk/government/news/leeds-businessman-receives-record-jail-sentence-over-22m-recycling-fraud>.

## ii Civil law

Private persons may also bring civil law claims in relation to the harms caused by breaches of environmental law. These are typically claims for damages or an injunction under the common law of nuisance, the rule in *Rylands v. Fletcher* or the common law of negligence, with a nuisance claim generally considered to have the highest chance of success.

Private nuisance requires the defendant's activities to have caused substantial and unreasonable damage to neighbouring land, the damage to be reasonably foreseeable and the activity to be unreasonable, even if it is lawful.<sup>50</sup> The creator of the nuisance may remain liable even if they have subsequently disposed of the land, and a new owner who is aware of the nuisance but does not attempt to abate it may also be liable.

The rule in *Rylands v. Fletcher*<sup>51</sup> creates liability where the defendant brings onto their land, collects or keeps on it something that is likely to cause damage if it escapes, provided that the damage is reasonably foreseeable and the defendant's activities on the land are 'non-natural' (e.g., industrial activity).

The threshold for bringing a claim for negligence requires that the defendant (who may have either caused the contamination or allowed it to continue) owed a duty of care to the claimant, that the duty was breached, and that the claimant suffered loss or damage as a result of that breach. It is a defence to negligence to show that the defendant exercised reasonable care in carrying out their activities. Such a defence does not apply to nuisance or *Rylands v. Fletcher*, where it is sufficient that the environmental damage occurred.

## iii Public law

Under the Regulatory Enforcement and Sanctions Act 2008,<sup>52</sup> environmental regulators have the power to impose civil sanctions as an alternative to prosecution in relation to certain environmental breaches. Civil sanctions include fixed monetary penalties, discretionary requirements, stop notices and enforcement undertakings.

Enforcement undertakings involve the offender making an offer to perform some act or to pay money to restore or remediate any harm caused by their breach of environmental legislation. Enforcement undertakings are the most common sanction, and since 2015 their usage by the Environment Agency in England has been extended to include breaches under the environmental permitting regime (as discussed below). The recent enforcement undertaking of Wessex Water is the highest to date, totalling £975,000 in environmental improvement payments following a series of sewage spills in Dorset in 2016 and 2017.<sup>53</sup>

Civil sanctions may also be imposed under other environmental legislation, including in relation to the EU ETS (as discussed below).

## iv Company law

Under the Companies Act 2006, directors are subject to a statutory duty to promote the success of the company for the benefit of its members as a whole.<sup>54</sup> In doing so, the directors

50 *Bamford v. Turnley* (1860) 122 ER 25; *Cambridge Water Co Ltd v. Eastern Counties Leather plc* [1994] 1 All ER 53.

51 *Rylands v. Fletcher* [1868] UKHL 1.

52 Regulatory Enforcement and Sanctions Act 2008 c. 13, Part 3.

53 <https://www.gov.uk/government/news/water-company-to-pay-a-record-975000-towards-environmental-improvements-following-sewage-spills-on-dorset-coast>.

54 Companies Act 2006, Section 172. Note that the Companies Act applies to all UK companies.

must take into account, among other factors, the impact of the company's operations on the community and environment. A director in breach of this duty could be subject to a derivative action by the shareholders on behalf of the company even if that director has not itself benefited from the breach. However, such an action is likely to be difficult given the requirement to prove subjective bad faith on the part of the director, and the general discretion given to directors to balance competing interests. Further, the courts have proven to be generally unwilling to interfere in the business decisions of a company.

## **V REPORTING AND DISCLOSURE**

### **i Reporting and disclosure**

There are several mechanisms by which companies may be required to report on or disclose environmental issues.

It is common for Environmental Permits (as discussed under Environmental Protection below) to include reporting conditions in relation to discharges to water, air emissions and other operational matters, and a number of environmental regimes impose further reporting requirements.

In addition, under the Environmental Damage (Prevention and Remediation) (England) Regulations 2015, operators are required to notify the relevant regulator of any imminent threats of environmental damage or any activity that has caused environmental damage, and to provide information to regulators upon request. The regulators themselves have wide powers to conduct investigations. For example, the EA is entitled to require that certain information is provided, gain access to premises, obtain samples, interview site employees and carry out emergency works. However, the EA must notify the operator in advance of entering a site, and cannot generally use information provided under compulsion in the prosecution of an offence.

Companies may also be required to disclose environmental liabilities as part of their strategic report under the Companies Act 2006. At present, all companies except certain small companies are required to produce a strategic report setting out a fair review of the company's business and a description of the principal risks and uncertainties it faces. This is a stand-alone document, and is separate from the directors' report. However, the extent of environmental reporting required varies. Large unquoted companies must consider environmental issues as a non-financial key performance indicator in their analysis of the company, but their obligations extend no further. The requirements for large or medium quoted companies are more extensive. They must report on environmental matters specifically, including the impact of the company's business on the environment, the company's environmental policies and the effectiveness of those policies. Small companies and medium unquoted companies are not subject to any environmental reporting requirements.

The Companies Act 2006 has broadly similar requirements to those under the Non-Financial Reporting Directive 2014.<sup>55</sup> In 2016, the government conducted a consultation on the implementation of the Non-Financial Reporting Directive, as well as on wider reforms outside its scope. At the end of 2016, the government subsequently published the Companies, Partnerships and Groups (Accounts and Non-Financial Reporting)

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55 Directive 2014/95/EU.

Regulations 2016, incorporating the requirements of the Non-Financial Reporting Directive by amending the strategic report regime under the Companies Act 2006, which came into force in early 2017.<sup>56</sup>

In the context of an acquisition, there are no specific statutory requirements for a seller to disclose environmental issues to a purchaser. Nevertheless, it is commercially reasonable for environmental due diligence to form a part of the acquisition process, given the potential liabilities faced by the purchaser. Environmental due diligence may include development and review of environmental reports, such as internal audit reports, phase 1 or phase 2 site assessments and insurance or other investigation reports. Depending on the business and the type of environmental issues identified, the process may also include the appointment of specialist environmental consultants, the incorporation of environmental warranties in transaction documents, a disclosure letter identifying information from the seller providing grounds for a breach of contract claim, and the incorporation of environmental indemnities in favour of the buyer against any losses incurred as a result of the seller's breaches of environmental regulation, permitting requirements or environmental claims.

## ii Whistle-blowers

Whistle-blowers in England and Wales are protected under the Public Interest Disclosure Act 1998,<sup>57</sup> both in relation to any unfair dismissal of the whistle-blower for making a protected disclosure and in relation to any unlawful detriment suffered by the whistle-blower as a result of making a protected disclosure. The potential liability to the employer is extensive, as there is no upper limit on compensation for unfair dismissal of a whistle-blower and the employer may be vicariously liable for the acts of its employees in causing detriment to the whistle-blower where it does not take all reasonable steps to prevent this.

The application of whistle-blower protections to environmental issues is considered explicitly in the legislation, and disclosures of environmental issues may be protected on several fronts. The legislation applies to disclosures that tend to show the current, future or past occurrence of a criminal offence or a breach of legal obligation, both of which may apply to breaches of environmental regulation. It also applies specifically to disclosures that tend to show that damage to the environment has occurred, is occurring or is likely to occur in the future.<sup>58</sup>

This legislation has been enforced in relation to environmental whistle-blowers on multiple occasions, including where the subject of the protected disclosure was a previous employer, highlighting the importance to companies of maintaining an adequate whistle-blower policy and avoiding breaches of environmental regulation.<sup>59</sup>

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<sup>56</sup> The regulations came into force on 26 December 2016. The amendments apply in relation to the financial years of companies and qualifying partnerships on or after 1 January 2017. [www.legislation.gov.uk/uksi/2016/1245/regulation/1/made](http://www.legislation.gov.uk/uksi/2016/1245/regulation/1/made). The Companies Regulations 2016 amend the Companies Act 2006 to implement the Directive in the text – see Part 15 of the Companies Act 2006, which has now been amended.

<sup>57</sup> Public Interest Disclosure Act 1998 c. 23.

<sup>58</sup> *ibid.*, Section 1.

<sup>59</sup> *Wharton v. Ward Recycling Ltd* ET/2800817/2008; *BP plc v. Elstone and another* UKEAT/0141/09.

## VI ENVIRONMENTAL PROTECTION

### i Environmental permits

Environmental permits in England and Wales are dealt with through the integrated environmental permitting (EP) regime, which has steadily incorporated and replaced the various distinct permitting systems that were previously in place. The Environment Agency, Natural Resources Wales and, in certain cases, local authorities have the authority to issue permits in relation to a range of regulated activities, and an operator must hold a permit in order to carry on any regulated activity.

The integrated EP regime was initially established in April 2008, combining the pre-existing Pollution Prevention and Control regime permits and waste management licences into a new system of environmental permits. From April 2010 the EP regime has also incorporated water discharge, groundwater discharge and radioactive substances registration and authorisation, with pre-existing consents converted automatically into environmental permits.

The current regulations for the EP regime are found in the Environmental Permitting (England and Wales) Regulations 2016 (the EP Regulations), which came into force on 1 January 2017.<sup>60</sup> As discussed above, these regulations consolidate the various amendments previously made to the Environmental Permitting (England and Wales) Regulations 2010.<sup>61</sup>

The Water Act 2014<sup>62</sup> introduced a right for the Secretary of State in England and the Welsh Ministers to extend the EP regime to include water abstraction, water impounding, fish pass approvals and flood defence consents, with a further update in 2016 to incorporate flood risk activities.

In 2013, there were further amendments to the EP regime, pursuant to the Industrial Emissions Directive,<sup>63</sup> which consolidated various earlier EU directives, and in 2015 pursuant to the Energy Efficiency Directive.<sup>64</sup>

- The integrated EP regime now covers a wide range of key activities, including:
- a* various industrial and power generation activities and installations specified in Schedule 1 to the Environmental Permitting Regulations;
  - b* waste operations, including mining waste operations;
  - c* mobile plant used in connection with a Schedule 1 activity or waste operations;
  - d* water discharge activities;
  - e* groundwater activity;
  - f* solvent emission activity;
  - g* radioactive substance activities;
  - h* flood risk activities; and
  - i* small waste incineration plants.

The level of regulation applied to the environmental permit varies depending on the activity in question. Activities that cause the most pollution are regulated in terms of their energy efficiency and of all their emissions, whereas lesser polluting activities may be regulated only

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60 Environmental Permitting (England and Wales) Regulations 2016/1154.

61 Environmental Permitting (England and Wales) Regulations 2010/675.

62 Water Act 2014 c. 21.

63 Industrial Emissions Directive 2010/75/EU.

64 Energy Efficiency Directive 2012/27/EU.

in terms of their air emissions. In some situations, a single environmental permit may be issued for multiple installations on a particular site, potentially reducing the burden on those carrying out multiple regulated activities. Standard permits with standard conditions also exist for a number of less-polluting waste activities, with scope to extend these permits to other industries in the future. Certain low-level waste management activities are fully exempted, subject to compliance with conditions such as registration and notice obligations.

Environmental permits do not have a fixed expiry date, and are subject to periodic review by the regulator. The regulator may suspend permits if there is a risk of serious pollution, or may revoke the permit where ‘appropriate circumstances’ exist. In many circumstances, environmental permits may only be transferred to a new operator by joint application to the regulator, and the surrender of many environmental permits also requires application to the regulator. This enables the regulator to ensure that appropriate environmental standards are maintained either by a new operator or after the activity has ceased.

## **ii Air quality**

There are two main forms of regulation relating to air quality. Ambient air quality regulation focuses on limiting the concentrations of specific pollutants in ambient air, whereas point source pollution regulation focuses on limiting the emissions to air of certain pollutants, primarily from industrial installations. Other methods used in the United Kingdom to regulate air quality include substance bans, such as the ban on chlorofluorocarbons; emissions trading under the EU ETS; and taxation, such as the Climate Change Levy.

### ***Ambient air quality***

Regulation of ambient air quality derives from three key sources: the UK National Air Quality Strategy (NAQS), the local air quality management (LAQM) system in England and Wales, and the EU Air Quality Directive 2008.

The NAQS, a requirement of the Environment Act 1995,<sup>65</sup> establishes a framework for improving ambient air quality across the United Kingdom, sets standards and objectives for a number of key pollutants and explains the various measures in place to achieve those objectives. The standards set are aimed primarily at improving human health; however, the objectives in relation to nitrogen dioxide and sulphur dioxide are also set with regards to the protection of vegetation and ecosystems.

The Environment Act 1995 also sets out the LAQM system,<sup>66</sup> which requires local authorities to review local air standards and assess compliance with the standards specified in the NAQS. If the standards are not being met, local authorities are required to designate air quality management areas and to prepare and implement remedial action plans. However, the obligation on local authorities is limited to acting ‘in pursuit of the achievement’ of the relevant air quality standards, as much air pollution regulation and enforcement lies outside their control.

The Air Quality Directive 2008,<sup>67</sup> implemented into English law by the Air Quality Standards Regulations 2010<sup>68</sup> and Air Quality Standards (Amendment) Regulations 2016,<sup>69</sup>

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65 Part IV Environment Act 1995 c. 25.

66 *ibid.*

67 Air Quality Directive 2008/50/EC.

68 Air Quality Standards Regulations 2010/1001.

69 Air Quality Standards (Amendment) Regulations 2016/1184.

sets obligatory limit values and non-obligatory target values for a range of air pollutants similar to the NAQS, and also requires the government to produce air quality plans setting out measures for meeting the required standards and action plans in the event that certain alert thresholds are breached. The regulations also incorporate the Fourth Daughter Directive,<sup>70</sup> which sets minimal target values for certain carcinogenic pollutants. The United Kingdom's air quality plans were successfully challenged by ClientEarth on three occasions from 2015 to 2018, including most recently in the High Court,<sup>71</sup> and as such the United Kingdom released a new draft Clean Air Strategy in May 2018, which sets out the government's plan to halve the harm to human health from air pollution in the United Kingdom by 2030.<sup>72</sup> Defra conducted a public consultation on the draft Clean Air Strategy during May to August 2018, and will release the final version of the Clean Air Strategy by March 2019.<sup>73</sup>

As part of its commitment to a 'Green Brexit', the UK government intends to introduce a comprehensive legislative framework to address air quality and pollution. Among other things, it is proposed that the legislation would enable the Transport Secretary to compel manufacturers to recall vehicles and machinery for any failures in their emissions control systems. The legislation will also create a new statutory framework for Clean Air Zones to simplify the current overlapping frameworks, as discussed above.<sup>74</sup>

In April 2019, the UK government will produce a National Air Pollution Control Programme,<sup>75</sup> which will set out the government's plan to meet its 2020 and 2030 emission reduction commitments under the National Emissions Ceiling Directive 2016.<sup>76</sup>

### **iii Point source pollution**

Emissions from industrial installations and mobile plants are regulated primarily under the Industrial Emissions Directive 2010,<sup>77</sup> which replaced the former Integrated Pollution Prevention and Control regime, as well as the Medium Combustion Plant Directive 2015.<sup>78</sup> These directives have been implemented into UK law via the EP Regulations; therefore, an environmental permit is necessary in relation to activities falling within their scope.

In November 2016, the government consulted on proposals to introduce additional controls on NO<sub>x</sub> emissions from diesel generators, including requiring an environmental permit from 2019 and imposing emission limits. On 23 March 2018, the government launched a £220 million Clean Air Fund for local authorities to use to reduce air pollution.<sup>79</sup> The autumn 2018 budget included an additional £20 million funding to support more local authorities in meeting their air quality obligations.<sup>80</sup>

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70 Fourth Daughter Directive 2004/107/EC.

71 See footnotes 35 to 37.

72 <https://www.gov.uk/government/consultations/air-quality-draft-clean-air-strategy-2018>.

73 Department for Environment, Food and Rural Affairs May 2018: draft Clean Air Strategy 2018. <https://consult.defra.gov.uk/environmental-quality/clean-air-strategy-consultation/>.

74 Draft Clean Air Strategy 2018, p. 72.

75 Draft Clean Air Strategy 2018, p. 71.

76 Directive 2016/2284/EU of the European Parliament and the Council on the reduction of national emissions of certain atmospheric pollutants. The Directive was implemented in the UK by the National Emission Ceilings Regulations 2018/129.

77 Industrial Emissions Directive 2010/75/EU.

78 Medium Combustion Plant Directive 2015/2193/EU.

79 <https://www.gov.uk/government/news/260-million-of-clean-air-funding-launched-by-government>.

80 Treasury, 2018 Budget, p. 64.



The Clean Air Act 1993<sup>81</sup> also imposes restrictions on point source pollution, enabling local authorities to designate smoke control areas<sup>82</sup> and making it an offence to emit 'dark smoke' from industrial or trade premises. As set out in the draft Clean Air Strategy 2018, the government intends to update these 'outmoded' and 'underused' provisions with more flexible, proportionate enforcement powers for local government.<sup>83</sup>

#### **iv Water quality**

##### ***Discharges to water***

Water pollution in England and Wales is regulated under the Water Resources Act 1991,<sup>84</sup> which applies to all 'controlled waters', including territorial waters, coastal waters, inland freshwaters and groundwater. A discharge to water may require various different consents, depending on: the type of activity creating the discharge; the substances in the discharge; whether the discharge is to groundwater, surface water or into a sewer; and whether the discharge occurs as part of some wider industrial activity.

Most discharges to surface water are regulated under Schedule 21 of the EP Regulations, whereas most discharges to groundwater are regulated under Schedule 22. In each case, an environmental permit will be required where the discharge falls within the scope of the EP regime.

Discharges of trade effluents to sewers are instead subject to the Water Industry Act 1991,<sup>85</sup> and require the operator to obtain a trade effluent discharge consent from the relevant sewerage company. The sewerage company itself will require an environmental permit to discharge the waste from its sewers into water, as discussed above.

Any facility regulated under some other branch of the EP regime is likely to include some form of discharge to water or sewers. In such cases, the environmental permit granted to the facility is likely to include conditions governing any discharges, for example, by monitoring the discharges that occur or minimising the emission of particular substances.

However, certain industries require a specific permit for their discharges to water pursuant to the Priority Substances Directive 2008.<sup>86</sup> These include the paper, textiles and food industries, with the requirement of a separate environmental permit triggered upon the concentration of certain hazardous substances released to water exceeding the relevant level specified in the EP Regulations. A separate trade effluent discharge consent would also be required for the discharge of these substances into sewers.

##### ***UK water quality***

Under the Water Framework Directive 2000,<sup>87</sup> the United Kingdom was required to achieve good ecological and good chemical status across all types of surface water bodies, groundwater bodies and heavily modified or artificial water bodies by 2015. Implemented in England and Wales by the Water Environment (Water Framework Directive) (England and Wales)

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81 Part I Clean Air Act 1993 c. 11.

82 Smoke control orders have now been implemented in most of the UK's major towns and cities.

83 Draft Clean Air Strategy 2018, p. 6.

84 Water Resources Act 1991 c. 57.

85 Water Industry Act 1991 c. 56.

86 Priority Substance Directive 2008/105/EC.

87 Water Framework Directive 2000/60/EC.

Regulations 2017,<sup>88</sup> the Water Framework Directive encourages a more robust approach both to point-source pollution and to diffuse water pollution. The 2017 Regulations provide that the appropriate agencies must achieve a number of objectives in respect of each river basin district by 22 December 2021, including updating management plans, establishing monitoring programmes and ensuring that each protected body of water complies with the relevant EU instrument standards and objectives.<sup>89</sup>

## **v Chemicals**

Chemicals in the United Kingdom are regulated under the EU Registration, Evaluation, Authorisation and Restriction of Chemicals regime (REACH), as set out in the REACH Regulation 2006.<sup>90</sup> The purpose of the regime is to ensure that chemicals are used in a manner that minimises any unacceptable risks to human health or to the wider environment, based on the transparent sharing of information throughout the chemicals supply chain. The requirements of REACH were phased-in over a 10-year period, with the final stage (registration of substances of 1 tonne or more per year) taking effect in 2018.

REACH is enforced in the United Kingdom via the REACH Enforcement Regulations 2008,<sup>91</sup> with the role of enforcing authority taken on either by the relevant environmental regulator, the Health and Safety Executive, local authorities or the Department of Business, Energy and Industrial Strategy as appropriate. All these bodies are required both to cooperate and to share information in respect of REACH compliance. The European Chemicals Agency (ECHA) is not an enforcing authority in its own right, but it may request enforcing authorities to act on its behalf.

The key provisions of REACH relate to the four limbs of registration, evaluation, authorisation and restriction. Those wishing to supply a substance must first register that substance with the ECHA. The ECHA may therefore exert considerable control over the chemicals industry by refusing registration to a given substance, rendering any manufacturing, import or downstream usage illegal. The supplier will also be subject to an evaluation process by the ECHA and national authorities. This evaluation could include a compliance check of dossiers, an evaluation of testing proposals and a substance evaluation to determine whether the substance in question poses a risk to human health or the environment.

Certain substances identified as ‘substances of very high concern’ (SVHCs) by the ECHA or national authorities will require specific authorisation to permit their use or sale. There are four broad categories of SVHCs: substances that are carcinogenic, mutagenic or toxic to reproduction; substances that are persistent, bio-accumulative and toxic; substances that are very persistent and very bio-accumulative; and substances that give rise to similar concerns to those in the previous categories. In addition, substances that are the subject of a restriction proposal by a Member State or the ECHA may be either restricted or banned entirely. Examples of restricted substances include asbestos and acrylamide.

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88 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017/407 revoke and replace the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003/3242.

89 Water Environment (Water Framework Directive) (England and Wales) Regulations 2017/407, Regulations 12(6), 13 and 22(6). Note that the relevant EU instruments are listed in Schedule 3.

90 Regulation (EC) 1907/2006.

91 REACH Enforcement Regulations 2008/2852.

The REACH Enforcement Regulations 2008 also place various obligations on companies operating in the chemicals sector. Failure to comply with these obligations constitutes a criminal offence. Some of the key obligations include:

- a* neither manufacturing nor placing on the market any substance that has not been registered;
- b* supplying appropriate instructions to the recipient of a substance;
- c* providing a safety data sheet;
- d* providing workers with access to information about the substances they may encounter in the course of their work;
- e* applying appropriate measures to control risks; and
- f* complying with the conditions of any authorisation.<sup>92</sup>

The UK government has stated that if it is unable to reach a deal with the European Union, it will ensure that UK legislation replaces the REACH regime via the EU Withdrawal Act. The replacement UK legislation would preserve REACH as far as possible, including establishing an IT system for the registration of new chemicals that is similar to the existing EU IT system. The Health and Safety Executive would act as the lead UK regulatory authority, with the EA and other regulators continuing to play a role in enforcement.<sup>93</sup>

## **vi Solid and hazardous waste**

### ***Solid waste***

The regulatory regime for solid waste covers the entirety of the waste cycle, from generation to transport to disposal. The extent of regulation depends on whether an operator is carrying out a 'waste operation', as defined in the EP Regulations.

Waste operations include the recovery or disposal of waste, as well as any preparation of the waste prior to recovery or disposal, and are a regulated activity under the EP regime. They require the operator to hold an environmental permit, and the operator must comply with Schedule 9 to the EP Regulations. Additionally, there are certain further requirements that apply to specific types of waste operations such as landfill sites, treatment of end-of-life vehicles, treatment of waste electrical and electronic equipment, waste incineration, treatment of waste batteries, mining waste operations, radioactive waste and packaging waste.

A business that merely produces waste will not require an environmental permit, as it is not carrying out waste operations. However, such businesses must still comply with the waste hierarchy and the waste duty of care.

Under the Waste Regulations 2011,<sup>94</sup> organisations involved in waste must take reasonable steps to apply the waste hierarchy when transferring waste. This sets out a priority order for waste management from prevention, re-use, recycling and recovery to environmental disposal as a last resort.

Under the Environmental Protection Act 1990,<sup>95</sup> anyone handling controlled waste is subject to the waste duty of care, and therefore must ensure that the waste does not cause harm to the environment and is only transferred to an authorised person. During January

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92 REACH Enforcement Regulations 2008/2852, Schedule 1.

93 <https://www.gov.uk/government/publications/regulating-chemicals-reach-if-theres-no-brexite-deal/regulating-chemicals-reach-if-theres-no-brexite-deal>.

94 Waste (England and Wales) Regulations 2011/988.

95 Environmental Protection Act 1990 c. 43, section 34.

to March 2018, Defra and the Welsh government held a consultation on proposals to tackle crime and poor performance in the waste sector. The government has announced a number of measures in response to the consultation, including measures to raise the standards for operator competence in the waste sector, and a fixed penalty notice for breaches of the household waste duty of care.<sup>96</sup>

### ***Hazardous waste***

Hazardous waste is subject to additional regulation under the Hazardous Waste Regulations 2005,<sup>97</sup> as amended to reflect the requirements of the Waste Framework Directive 2008.<sup>98</sup> Waste is classified as hazardous where it is listed under the EU List of Wastes<sup>99</sup> or the Environmental Protection Act 1990,<sup>100</sup> or where it is specifically determined as hazardous, pursuant to the Hazardous Waste Regulations 2005.

Environmental permits are required to carry on waste operations involving hazardous waste as discussed above, and the waste hierarchy and waste duty of care apply. While the requirement for the registration of premises where hazardous waste is produced, collected or removed ended in April 2016, it is still necessary for all parties involved with hazardous waste to maintain detailed records of the production, transport, treatment and disposal of hazardous waste, whether by tipping or some other method of discharge or recovery.<sup>101</sup> In addition, there are restrictions on the mixing of hazardous waste, and specific requirements relating to the transport of hazardous waste to ensure consignments are properly tracked.

### ***Financial provision***

The operators of landfill sites are currently required to make financial provision to cover the costs associated with the closure and aftercare of the site; however, no other operators are required to make financial provisions.

A consultation by Defra and the Welsh government in 2015 found a clear majority of respondents supported the reintroduction of financial provision for all permitted waste operations, and that this provision should be sufficient to cover both the cost of returning the land to a satisfactory state and any foreseeable clean-up costs of any environmental accidents. There was also majority support for increasing the financial provision in relation to landfill sites, although this was more limited. The government accordingly expressed an intention to bring forward proposals.<sup>102</sup>

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96 <https://www.gov.uk/government/consultations/reducing-crime-at-sites-handling-waste-and-introducing-fixed-penalties-for-waste-duty-of-care/outcome/government-response>.

97 Hazardous Waste (England and Wales) Regulations 2005/894.

98 Waste Framework Directive 2008/98/EC.

99 Commission Decision on the European List of Waste (COM 2000/532/EC), as amended by Commission Decision 2014/955/EU.

100 Environmental Protection Act 1990 c. 43, section 62A.

101 Note that registration is still required for hazardous waste producers in Wales. See <https://naturalresources.wales/permits-and-permissions/waste/register-as-a-producer-of-hazardous-waste/?lang=en>.

102 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/466879/waste-crime-consult-sum-resp.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/466879/waste-crime-consult-sum-resp.pdf).

## **vii Contaminated land**

### ***Remediation***

The rules on identifying and remediating contaminated land are set out in the Environmental Protection Act 1990.<sup>103</sup> The purpose of the contaminated land regime is to encourage the remediation of significant historic contamination. As such, it is not an offence in itself to contaminate land, but it is an offence to fail to comply with a remediation notice.

Local authorities are first required to identify contaminated land. Once contaminated land has been identified, the relevant enforcing authority must serve a remediation notice to the relevant persons requiring them to remediate the contamination. The enforcing authority is typically the local authority, but may be the relevant regulator (i.e., the Environment Agency, Natural Resources Wales, SEPA or NIEA) where the contaminated land in question constitutes a 'special site'.

In its remediation notice, the enforcing authority will identify the reasonable steps required to remediate the land. These steps are determined by reference to the efficacy of any proposed remediation actions, the environmental and health impacts of the remedial actions, the cost of the remediation and the benefits of the remediation in relation to the harm. Ideally, remediation should aim to restore the land to a position where it poses no further risk of environmental harm, such that the land no longer qualifies as contaminated. The enforcing authority cannot require a higher standard of remediation. However, where the application of this standard is not practical, the enforcing authority can consider a lesser standard.

### ***Liability for clean up***

In the first instance, the person who either caused or knowingly permitted the contamination is liable. Such a person is categorised as a Class A person. If no Class A person can be found, the current owner or occupier of the site becomes liable, and is categorised as a Class B person. The Class B person does not need to have been aware of the contamination occurring in order to be liable for it. Given the potential scale of remediation costs, the process of identifying the presence of contaminated land therefore forms a key issue in property transactions or corporate acquisitions involving the transfer of land. Where multiple Class A or Class B persons exist, the enforcing authority will apportion liability according to the rules set out in the Environmental Protection Act 1990.<sup>104</sup>

The enforcing authority also has step-in rights to carry out remediation itself in certain situations, such as in the event of an emergency, where a remediation notice has been breached, where the enforcing authority would not recover all of its costs from the appropriate person or where no appropriate person can be found.

New waste enforcement regulations were passed in 2018 to supplement enforcing authorities' powers in respect of non-compliant waste sites.<sup>105</sup> The EA and National Resources Body for Wales are now able to restrict the entry of persons and further waste to waste sites, and require the removal of all waste at non-compliant sites.

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<sup>103</sup> Environmental Protection Act 1990 c. 43, Part IIA.

<sup>104</sup> *ibid.*

<sup>105</sup> Waste Enforcement (England and Wales) Regulations 2018/369.

### ***Recovery of costs***

In recovering its costs, the enforcing authority must consider the Contaminated Land Statutory Guidance.<sup>106</sup> The polluter should pay for the cost of remediation where possible; however, enforcing authorities should aim for a result that is as fair and equitable as possible, including the cost to the taxpayer. The enforcing authority should not consider financial hardship in the process of attributing and apportioning liability; however, it may waive or reduce the final remediation costs should it consider the resulting financial hardship on those liable to be too severe.

As an alternative to recovering the costs of remediation directly, the enforcing authority also has the power to defer recovery by taking a statutory charge over the property in question, provided that the owner of the land caused or knowingly permitted the contamination.<sup>107</sup>

## **VII CLIMATE CHANGE**

The Climate Change Act 2008<sup>108</sup> lays out regulation regarding greenhouse gas (GHG) emissions. It requires the United Kingdom to reduce its GHG emissions to 80 per cent below 1990 levels by 2050. The relevant GHGs include carbon dioxide; methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

There are three primary methods used by the government to restrict GHG emissions: the Climate Change Levy; the Emissions Trading Scheme coupled with the Carbon Price Floor; and Climate Change Agreements.

### **i Climate Change Levy**

Adding approximately 15 per cent to energy bills of businesses and public sector organisations, the Climate Change Levy (CCL) is a carbon tax designed both to encourage the use of energy from renewable resources, and to encourage the use of less energy more generally. There are four categories of taxable commodities that are subject to the CCL: electricity; natural gas as supplied by a gas utility; petroleum and hydrocarbon gas in a liquid state, including liquid petroleum gas; and solid fuels. Solid fuels are categorised as: coal and lignite; coke and semi-coke of coal or lignite; petroleum coke; and low value solid fuel with an open market value of no more than £15 per tonne. However, exemptions were introduced in 2014 for energy used in metallurgical and mineralogical processes, and for solid fuels used in certain gasification processes. The rate of CCL has increased almost every year since 2007, broadly in line with inflation determined with reference to the retail price index.<sup>109</sup>

### **ii Emissions Trading Scheme and Carbon Price Floor**

The Carbon Price Floor (CPF), introduced in April 2013 as part of the government policy of Electricity Market Reform, places a minimum price on GHGs emitted by the power sector. The CPF is designed to supplement the EU ETS transposed into the United Kingdom's

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106 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/223705/pb13735cont-land-guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223705/pb13735cont-land-guidance.pdf).

107 Environmental Protection Act 1990 c. 43, Part IIA.

108 Climate Change Act 2008 c. 27.

109 <https://uk.practicallaw.thomsonreuters.com/Document/I2cc9bcc0e67f11e398db8b09b4f043e0/View/FullText.html>.

domestic GHG emissions trading regulations, which require companies to buy permits to emit greenhouse gases while generating electricity. Since the price of these permits can fall, the incentive to reduce emissions decreases. The CPF therefore imposes a minimum price that companies must pay in order to pollute, providing a baseline incentive for companies to cut emissions. In the 2014 budget, the government declared that the Carbon Price Support (CPS) rate (i.e., the difference between the future market price of carbon and the floor price that acts as one component of the CPF) would be capped at £18 per tonne/CO<sub>2</sub> from 2016 to 2020.<sup>110</sup> This cap was extended in the autumn 2018 budget until 2021.<sup>111</sup> From 2021 to 2022, the government has indicated that it will seek to reduce the CPS rate if the total carbon price remains high (i.e., the sum of the CPS rate and the EU ETS price).<sup>112</sup>

In December 2017, the government passed amending regulations to bring forward the 2018 deadlines for UK-issued allowances under the EU ETS.<sup>113</sup> As a result of the amendments, UK-regulated operators are required to report their 2018 emissions and surrender allowances for those emissions by 15 March 2019. The amendments were prompted by concerns that the United Kingdom's exit from the European Union would invalidate UK operators' participation in the EU ETS.<sup>114</sup>

The government has announced that if the United Kingdom departs from the EU ETS in 2019, it will replace the ETS with a carbon emissions tax.<sup>115</sup> The tax would apply to all stationary installations currently participating in the EU ETS from 1 April 2019, at a rate of £16 per tonne of carbon dioxide over and above an installation's emissions allowance, based on the installation's free allowances under the EU ETS.<sup>116</sup> The government has indicated that it is continuing to develop options for long-term carbon pricing, including remaining in the EU ETS, establishing a UK ETS (linked to the EU ETS or standalone) or a carbon tax.

### iii Climate Change Agreements

For energy-intensive businesses looking for discounts on the CCL, climate change agreements (CCAs) were introduced in 2012. These are voluntary agreements made between the Environment Agency and sector associations and their members. The agreements set targets for industries to improve energy efficiency or reduce CO<sub>2</sub> emissions. Meeting set targets makes the industry eligible for the discount CCL tax rate. From 1 April 2013, the discount received is 90 per cent on electricity bills and 65 per cent on other fuels. However, failure to meet the set targets under a CCA can result in the imposition of a financial penalty. If operators of CCAs fail to meet their requirements, they can continue to be eligible for the discounted tax if they pay a buyout fee to cover the deficit.

110 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/293759/37630\\_Budget\\_2014\\_Web\\_Accessible.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/293759/37630_Budget_2014_Web_Accessible.pdf).

111 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/508193/HMT\\_Budget\\_2016\\_Web\\_Accessible.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/508193/HMT_Budget_2016_Web_Accessible.pdf).

112 Treasury, 2018 Budget, p. 47.

113 Greenhouse Gas Emissions Trading Scheme (Amendment) Regulations 2017/1207.

114 <https://www.gov.uk/government/publications/carbon-emissions-tax/carbon-emissions-tax>; [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/686052/Government\\_Response\\_to\\_EU\\_ETS\\_2018\\_compliance\\_deadlines\\_consultation.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/686052/Government_Response_to_EU_ETS_2018_compliance_deadlines_consultation.pdf).

115 <https://www.gov.uk/government/publications/carbon-emissions-tax/carbon-emissions-tax>. The Carbon Emissions Tax is included in the Finance Bill 2018-19. See clauses 68–78.

116 Treasury, 2018 Budget, pp. 47–48.

The Committee on Climate Change (CCC), established as part of the Climate Change Act 2008, is an independent body that advises the government on how it should meet its carbon budgets and carries out annual assessments as to whether the government is meeting its requirements. In 2017, UK emissions were 43 per cent below 1990 levels.<sup>117</sup> The UK government did meet the first carbon budget and the CCC has predicted that the government will be able to meet its second and third budgets. However, meeting the fourth budget (2023 to 2027) will not be possible without further measures. For the United Kingdom to cut its emissions by 80 per cent below 1990 levels by 2050, domestic emissions must be reduced by at least 3 per cent a year.<sup>118</sup>

#### **iv The UNFCCC, the Kyoto Protocol and the Paris Agreement**

The United Kingdom is also a party to the UNFCCC,<sup>119</sup> and accordingly a signatory to the Kyoto Protocol<sup>120</sup> and most recently to the Paris Agreement,<sup>121</sup> which entered into force on 4 November 2016. The Paris Agreement places various requirements on its signatories. This includes limiting global temperature increases by, among other things: developing and implementing nationally determined contributions (NDC); peaking GHG emissions as soon as possible and progressing towards zero net emissions; minimising the loss and damage from climate change; and supporting climate change adaptation. This also requires that signatories provide financial support to developing countries and cooperate with other signatories to transfer technology, achieve their NDCs, build capacity of developing countries and improve public awareness and transparency.

However, the decarbonisation target under the Paris Agreement was agreed at an EU level, and therefore an allocation must take place to assign an NDC to the United Kingdom that may be affected by Brexit. Nevertheless, the UK government has itself committed to a legally binding target of cutting carbon emissions to 57 per cent below 1990 levels by 2032.<sup>122</sup> Further, several of the United Kingdom's decarbonisation initiatives, such as the closure of coal-fired power plants, are domestic in origin and should not be affected by any change in circumstances following Brexit.

## **VIII OUTLOOK AND CONCLUSIONS**

The UK government is planning numerous environmental reforms envisioned to take effect over the coming years. These will define the United Kingdom's future environmental and climate change policy and the mechanisms to apply it. Water abstraction is a key focus, with Defra and the Welsh government concluding a consultation in January 2016 and committing to implement reforms of the current abstraction licensing system by the early 2020s. In December 2017, a Water Abstraction Reform Plan was published that proposes to focus reform on addressing unsustainable abstraction, developing a stronger catchment focus for

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117 <https://www.theccc.org.uk/tackling-climate-change/reducing-carbon-emissions/how-the-uk-is-progressing/>.

118 <https://uk.practicallaw.thomsonreuters.com/Document/I2cc9bcc0e67f11e398db8b09b4f043e0/View/FullText.html>.

119 <http://unfccc.int/2860.php>.

120 [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php).

121 [http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php).

122 The Carbon Budget Order 2016/785.



rainwater and modernising the system for abstractors.<sup>123</sup> The intention of the reforms is both to improve flexibility in addressing short-term water availability, and to improve long-term sustainable management supporting growth and investments. In particular, proposals include the introduction of water trading in areas of water scarcity and the incorporation of water abstraction and water impounding into the EP regime.<sup>124</sup>

The UK government is also undertaking a simplification of the regulatory regime relating to business energy efficiency through the closure of the CRC Energy Efficiency scheme from April 2019 and its replacement with an increased CCL.<sup>125</sup> As announced in the autumn budget 2016, the government will increase the main rates of the Climate Change Levy from April 2019 to replace the foregone revenue from the CRC scheme.<sup>126</sup>

Finally, the regulatory framework for hydraulic fracturing of shale gas continues to develop in response to industry studies as well as community and NGO pressure. On 11 November 2017, following a public consultation process, the government announced that it would create a Shale Wealth Fund,<sup>127</sup> which will enable local communities to choose how they spend up to £1 billion in total (up to £10 million per local community) from the proceeds of shale gas extraction on funding for local projects.<sup>128</sup> The Shale Wealth Fund will initially consist of up to 10 per cent of tax revenues arising from shale gas production, a proportion of which will be distributed to local communities over a 25-year period.<sup>129</sup>

The government has also previously proposed that operators making use of underground rights of access to sources of gas, oil and geothermal energy be required to make additional voluntary payments to local communities for lateral wells (with those payments becoming mandatory if operators fail to participate),<sup>130</sup> in addition to any payments under the industry Community Engagement Charter.<sup>131</sup> Most recently, the government has announced the creation of a Shale Environmental Regulatory Group to coordinate shale regulation, and a Commissioner for Shale Gas to act as a point of contact for the public.<sup>132</sup>

The future development of UK environmental legislation is to some extent uncertain, as it is likely to be affected by the outcome of the country's Brexit negotiations with the European Union. As described below, the EU Withdrawal Act provides for the creation of a new, independent body for environmental standards that will hold the government to account after leaving the European Union. It is unclear to what extent this body will prove a

123 <https://www.gov.uk/government/publications/water-abstraction-plan-2017/water-abstraction-plan#addressing-unsustainable-abstraction>.

124 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/492411/abstraction-reform-govt-response.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492411/abstraction-reform-govt-response.pdf).

125 <https://www.gov.uk/government/collections/crc-energy-efficiency-scheme>.

126 <https://www.gov.uk/government/publications/climate-change-levy-main-and-reduced-rates/climate-change-levy-main-and-reduced-rates>.

127 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/544241/shale\\_wealth\\_fund\\_final\\_pdf-a.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544241/shale_wealth_fund_final_pdf-a.pdf).

128 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/658793/shale\\_wealth\\_fund\\_response\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/658793/shale_wealth_fund_response_web.pdf).

129 <https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk#community-and-public-engagement>.

130 <https://www.gov.uk/government/news/government-proposals-to-simplify-deep-underground-access-for-shale-gas-and-geothermal-industries>.

131 <http://www.ukoog.org.uk/community/charter>.

132 <https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk#community-and-public-engagement>.

robust alternative to the work of the European Commission. The European Parliament has resolved that any future agreement between the European Union and the United Kingdom is conditional on the United Kingdom's continued adherence to the European Union's standards and policies on the environment and tackling climate change.<sup>133</sup>

The EU Withdrawal Act, which was passed by Parliament on 20 June 2018 and received Royal Assent on 26 June 2018, enables the incorporation of all existing EU legislation into domestic law so that it shall remain in force after the United Kingdom departs from the European Union.<sup>134</sup> Section 16 of the EU Withdrawal Act requires the Secretary of State to publish a draft Environmental Principles and Governance Bill by 26 December 2018.<sup>135</sup> The Environmental Principles and Governance Bill must contain a minimum set of environmental principles and a duty on the Secretary of State to publish a supporting policy statement, as well as a duty for Ministers to have regard to the policy statement; and provisions for the creation of a new independent authority with the ability to take proportionate enforcement action (including legal proceedings) against a Minister where it is considered that the Minister is not complying with environmental law. Defra invited public proposals on the Bill during a consultation period in May to August 2018.<sup>136</sup>

While it is not anticipated that Brexit will result in any immediate significant alterations to environmental regulation in the United Kingdom,<sup>137</sup> there is some speculation that the review of environmental regulation following Brexit may be used by the government as an opportunity to deregulate in certain areas, such as air quality and sewerage, where the United Kingdom has historically struggled to meet EU standards.<sup>138</sup> Brexit may, on the other hand, be a 'once-in-a-generation opportunity' for the United Kingdom to make improvements to its environmental policy framework.<sup>139</sup> The United Kingdom is a leader among EU Member States when it comes to adopting EU directives; however, ultimately, the fate of UK environmental and climate change legislation may be in a holding pattern for the near future.

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133 European Parliament resolution of 14 March 2018 on the framework of the future EU–UK relationship (2018/2573(RSP).

134 European Union (Withdrawal) Act 2018.

135 European Union (Withdrawal) Act 2019, section 16(1).

136 <https://consult.defra.gov.uk/eu/environmental-principles-and-governance/>.

137 <https://uk.practicallaw.thomsonreuters.com/Document/Id4af1a371cb511e38578f7ccc38dcbce/View/FullText.html>.

138 <https://uk.practicallaw.thomsonreuters.com/Document/I3351a6a6e8da11e398db8b09b4f043e0/View/FullText.html>.

139 Department for Environment, Food and Rural Affairs 11 January 2018: Policy Paper (Gov't Publication): A Green Future: Our 25 Year Plan to Improve the Environment, p. 129.

# UNITED STATES

*Theodore L Garrett*<sup>1</sup>

## I INTRODUCTION

US environmental law had its impetus with Earth Day in 1970, when millions of people demonstrated in favour of environmental reform. The Environmental Protection Agency (EPA) was created in 1970, and the Clean Air Act was passed that year. Those events were followed by the enactment of the Clean Water Act in 1972, the Solid Waste Disposal Act and the Toxic Substances Control Act in 1976, and the Superfund Law (CERCLA) in 1980. A complex and lengthy set of implementing regulations have been promulgated by EPA over the years, set forth in 40 Code of Federal Regulations, the printed version of which is more than 3 feet wide.

During the 2016 presidential campaign, the President-elect, Donald Trump, promised to scale back government regulation and criticised the Obama administration's Climate Action Plan. In the autumn of 2017, EPA announced an intent to repeal the Clean Power Plan and to narrow the definition of waters of the United States subject to federal regulation. EPA has since taken steps to implement these policies, and a more business-friendly climate has emerged, including support for oil and gas production on publicly owned lands. The full scope of environmental policies and regulations the current administration will pursue remains to be seen, but changes in federal direction and priorities have clearly emerged. A number of EPA's actions have been challenged in courts, and one can expect increased legislative oversight now that the Democrats have a majority in the US House of Representatives. This adds a degree of uncertainty, and interested parties will wish to carefully monitor developments.

In the meantime, various state and local government entities are actively pursuing their own climate change and other environmental programmes and plans, given their low expectations for progress at the federal level.

## II LEGISLATIVE FRAMEWORK

The principal sources of environmental law are statutes enacted by the US Congress and signed by the President, as well as common law that addresses personal injuries and related matters. Federal statutes that address air quality, water quality, chemicals, and solid and hazardous waste are discussed below. Numerous other US laws, such as those involving endangered

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species, marine mammal protection, noise control, surface mining control, oil pollution and coastal zone management, are beyond the scope of this chapter, as are laws of individual states that in some cases have developed more stringent environmental programmes.

With respect to treaty obligations, the United States is a signatory to the 1987 Montreal Protocol to phase out chlorofluorocarbons, and the 2016 Kigali Agreement concerning the use of hydrofluorocarbons, chemicals with high climate-change potential. The United States is also a signatory to the 2015 Paris Agreement on climate change, which is discussed below, but the Trump administration has now stated that the United States will not participate.

### **III THE REGULATORS**

US national environmental laws are principally implemented by EPA. The EPA headquarters in Washington, DC focus on the development of regulations and national policy,<sup>2</sup> while the 10 EPA regional offices focus on implementation and enforcement. Other agencies, such as the US Forest Service within the Department of Agriculture and the Department of the Interior, address environmental issues in the context of managing federal lands. The US Army Corps of Engineers has responsibilities with respect to activities in waters of the United States. The US Department of Justice represents EPA and other federal agencies in lawsuits seeking to enforce or challenge agency regulations. In addition, states may be delegated authority to implement and enforce federal environmental laws within their respective states, upon EPA approval of the state's programme. State environmental programmes are in general not pre-empted, and in some cases states have developed their own programmes that are more stringent than federal programmes.

### **IV ENFORCEMENT**

Environmental enforcement is accomplished through federal and state administrative civil and judicial actions as well as citizen suits. The operation of manufacturing facilities generally requires one or more permits, and companies are subject to civil and possible criminal liability if they operate without a required permit or violate the terms of their permits. In addition, there are a number of air, water and waste requirements established by regulation or statute, the violation of which is enforceable. In enforcement proceedings, the government may seek to require compliance and recover penalties. In criminal suits, the government typically focuses on conduct that undermines the integrity of the law, such as submitting false information to the government, or egregious conduct that creates significant injury to the public or the environment. The major US environmental statutes also give citizens the right to sue to seek compliance by regulated entities if federal enforcement is lacking.

The environmental laws discussed below provide that EPA actions, such as the promulgation of regulations and the issuance of permits, are subject to judicial review in the US federal courts. These laws also allow citizens to bring lawsuits to compel compliance with regulatory requirements and to compel EPA to perform a non-discretionary duty. I will not dwell on those provisions in discussing the individual statutory programmes.

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2 In July 2018, EPA Administrator Scott Pruitt, faced with federal inquiries into his ethics, spending and management, resigned under pressure. Andrew Wheeler, previously the Deputy Administrator, is the acting EPA Administrator at the time of writing.

## V REPORTING AND DISCLOSURE

The air, water and waste statutes discussed below require companies to submit permit applications containing information concerning operations and discharges to EPA or a delegated state agency. Companies are also generally required by their permits to monitor their compliance and submit regular reports to regulatory agencies. Such environmental information is considered information available to the public under the Freedom of Information Act, 5 U.S.C. 552, and EPA's regulations and similar state laws.

There is an obligation to investigate and remedy real property in connection with transfers of property under some state laws, for example the state of New Jersey statute known as the Industrial Site Recovery Act, NJSA 13:1K-6. In a merger or sale between companies, the requirement of disclosure will depend on the dealings between the prospective buyer and seller, but typically buyers will request information concerning environmental conditions during the due diligence process. In addition, the purchase and sale contract will typically contain representations and warranties concerning environmental conditions and compliance with environmental regulations.

The US Securities and Exchange Commission has adopted rules and policies to require companies to disclose environmental liabilities to the extent necessary to make financial statements not misleading.<sup>3</sup> For example, the SEC requires disclosure of certain costs of complying with environmental laws, of environmental litigation and of risk factors that make an investment risky. Climate change must also be considered when preparing disclosures.

Several federal environmental statutes protect employees from discrimination or retaliation for reporting violations of environmental laws. These statutes include the Clean Air Act (CAA), the Clean Water Act and CERCLA.<sup>4</sup>

## VI ENVIRONMENTAL PROTECTION

### i Air quality

The CAA, enacted in 1970, was the first modern federal environmental control statute.<sup>5</sup> It established a federal and state partnership for the development and implementation of air quality regulation. The CAA was amended significantly in 1977 and again in 1990.

#### *Overview*

EPA adopts national air quality standards (NAAQS) pursuant to Section 109 of the Act.<sup>6</sup> These standards are designed to protect public health and welfare. Standards have been established for six pollutants: sulphur dioxide, particulate matter, nitrogen dioxide, carbon monoxide, ozone and lead.<sup>7</sup>

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3 See Regulation S-K, 17 C.F.R. Section 229, and 47 Fed. Reg. 11380 (1982).

4 See 42 U.S.C. Section 7622(a) (the Clean Air Act).

5 42 U.S.C. Section 7401 et seq.

6 42 U.S.C. Section 7409.

7 40 C.F.R. Part 50.

The NAAQS are implemented through state implementation plans (SIPs).<sup>8</sup> SIPs are regulations setting forth specific emission limitations designed to attain and maintain the NAAQS. The plans are developed by the states and submitted to EPA for approval. Once approved, the SIPs are enforceable by both the states and the federal government.

In 1977 Congress added a new Part D to the CAA, addressing problems of continuing non-attainment of the NAAQS. It required emission limits based on ‘reasonably available control technology’ (RACT) for all existing major sources.<sup>9</sup> The 1977 amendments also required, for new sources in non-attainment areas, pre-construction permits based on attainment of the ‘lowest achievable emission rate’.<sup>10</sup> The 1977 amendments required pre-construction review and permits for major new sources in attainment areas, which are to achieve limits based on the ‘best available control technology’.<sup>11</sup> In addition, SIPs in attainment areas must assure that maximum allowable ‘increments’ (or increases in the concentration of pollutants) shall not be exceeded.<sup>12</sup>

In 1990 Congress enacted CAA amendments that revised the provisions for areas not attaining the national ambient air quality standards, strengthened automotive tailpipe and fuel requirements, expanded the number of hazardous air pollutants regulated, added requirements for the electric utility industry to control acid rain and established an important programme of operating permits for existing facilities.<sup>13</sup>

Programmes limiting greenhouse gas emissions from power plants and motor vehicles are discussed in Section VII.

### ***Control requirements to meet NAAQS***

In ozone non-attainment areas, ‘major sources’ of criteria pollutants are required to apply all RACTs.<sup>14</sup> Sources in ‘serious’ PM<sub>10</sub> areas must apply best available control measures.<sup>15</sup>

Major new sources of volatile organic compounds (VOCs) and NO<sub>x</sub> in ozone non-attainment areas must have emission offsets, which vary according to the area’s classification.<sup>16</sup> In addition, special rules apply in serious, severe and extreme ozone non-attainment areas.

In ozone non-attainment areas, SIPs must include motor vehicle emissions control inspection and maintenance programmes of varying stringency depending upon the area’s classification.<sup>17</sup> In carbon dioxide non-attainment areas classified as serious, SIPs must require oxygenated gasoline in certain areas if necessary to attain the NAAQS by the attainment deadline.<sup>18</sup> In some cases, states may be required to institute transportation control measures to offset growth or bring emissions within projected levels.

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8 42 U.S.C. Section 7410.

9 42 U.S.C. Section 7502.

10 42 U.S.C. Section 7503.

11 42 U.S.C. Section 7475(a).

12 42 U.S.C. Section 7473.

13 42 U.S.C. Section 7401-7642.

14 42 U.S.C. Section 7502(c)(1).

15 42 U.S.C. Section 7513a(b)(1)(B).

16 42 U.S.C. Section 7511a(a)(4).

17 42 U.S.C. Section 7511a(a)(2)(B).

18 42 U.S.C. Section 7512a(b)(3).

### ***New source standards***

Section 111 of the Clean Air Act authorises EPA to promulgate standards of performance for new stationary sources.<sup>19</sup> These standards are to require the degree of emission limitation achievable by 'the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.'<sup>20</sup> EPA has established standards of performance for a number of industry categories, including steam generating units, incinerators, petroleum refineries, steel plants, kraft pulp mills, automotive surface coating, synthetic organic chemicals plants and natural gas processing plants.<sup>21</sup>

### ***Motor vehicles***

Section 202 of the Clean Air Act authorises EPA to establish motor vehicle emission standards.<sup>22</sup> The Act also authorises EPA to regulate fuels. Pursuant to Section 211 of the Act, EPA has promulgated two sets of standards that limit the lead content of fuels. These standards are designed to prevent interference with catalytic emission control devices and to protect public health.<sup>23</sup>

The Clean Air Act Amendments of 1990 require more stringent tailpipe standards to control exhaust pollutants from cars and trucks, improvements in the controls of evaporative emissions from vehicles, and the installation of equipment on vehicles to control refuelling emissions. The amendments contain a new standard to control CO emissions at cold temperatures, and require the installation of self-diagnostic equipment on vehicles to monitor the functions of critical emission control equipment. The amendments also establish a new programme requiring the sale of 'reformulated gasoline' in the nine worst ozone non-attainment areas to reduce emission of VOCs and other pollutants.

### ***Hazardous pollutants and acid rain***

The Clean Air Act authorises EPA to set health-based standards for hazardous air pollutants.<sup>24</sup> The 1990 amendments identify a list of 189 hazardous pollutants and direct EPA to establish standards based on the use of the 'maximum achievable control technology'. The list includes chemicals and metals used in many industrial processes. Standards for new sources must require a degree of reduction that is not 'less stringent than the emission control that is achieved in practice by the best controlled similar source'.<sup>25</sup>

Federal regulations enacted in 2011 require power plants to limit their emissions of toxic air pollutants, such as mercury, under Sections 111 (new source performance standards) and 112 (the toxics programme) of the Clean Air Act. However, the current EPA is reviewing whether it is 'appropriate and necessary' to set standards for mercury, other pollutants and the specific standards set by the rule, and is reportedly planning to publish a revised rule.

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19 42 U.S.C. Section 7411.

20 42 U.S.C. Section 7411(a)(1).

21 See 40 C.F.R. Part 60.

22 42 U.S.C. Sections 7521, 7525.

23 42 U.S.C. Section 7545; 40 C.F.R. Part 80.

24 42 U.S.C. Section 7412.

25 CAA Section 112(d)(3).

The 1990 amendments direct EPA to establish a programme to reduce the adverse effects of acidic deposition. The Act mandates a national emissions cap of 8.95 million tons per year on emissions of sulphur dioxide from electric utility power plants, to be achieved in two phases. As a result of these stringent new limitations, total annual sulphur dioxide emissions will be reduced by 10 million tons below 1980 levels. Title IV also requires that certain coal-fired electric utility boilers reduce their emissions of nitrogen oxides through installation of 'low NO<sub>x</sub>' burner technologies or their equivalent.

The acid rain programme contains a trading system with a fixed number of fully marketable allowances.<sup>26</sup> Existing utility sources were granted allowances based on their historic fuel use and the emission limitations applicable in 1985. Utility units may not emit sulphur dioxide in quantities exceeding the number of allowances they hold for a given year.

### ***Permit programme***

The 1990 amendments to the Act added a new Title V to establish an operating programme.<sup>27</sup> The Title V permit programme is designed to be administered by the states if EPA approves a state programme. EPA may veto any permit that it believes does not comply with the applicable CAA requirements. In general, each operating permit will contain enforceable emission limitations, a schedule for compliance, and monitoring and reporting requirements. Sources subject to the Title V permit requirements include any 'major source' as defined in Sections 112 or 302 or Part D of Title I, any source subject to standards or regulations under Sections 111 or 112, or any source required to have a permit under Part C or Part D of Title I. Under Section 502(b)(6) of the Act, each state permit programme must provide for public notice of, and an opportunity for public comment and a hearing on, all permit applications. Failure to obtain a permit is subject to civil penalties and possible criminal sanctions.<sup>28</sup>

### ***Enforcement***

The Clean Air Act is enforceable by the United States, and most of the Act's regulatory programmes are also enforceable by states with comparable programmes that have been approved by EPA. EPA has the authority to issue compliance orders and to seek administrative penalties. The federal government may also seek injunctive relief and civil as well as criminal penalties in federal district courts.<sup>29</sup> Citizens may also bring suits seeking compliance and penalties.<sup>30</sup>

## **ii Water quality**

Discharges of process wastewater and stormwater are regulated under the Clean Water Act (CWA or the Act) through a federal and state programme of facility permits and regulatory standards.<sup>31</sup> As enacted in 1972, the CWA established a permit programme and a deadline for technology-based limits on discharges of pollutants to be achieved by direct industrial dischargers and municipal treatment works as well as any more stringent water-quality-based standards imposed by states.

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26 40 C.F.R. Part 73.

27 42 U.S.C. Sections 7661 et al.

28 CAA Section 502(b)(5)(E).

29 42 U.S.C. Sections 7413, 7420.

30 42 U.S.C. Section 7604.

31 33 U.S.C. Section 1251 et seq.



### ***Technology-based effluent limitations***

In 1977 Congress enacted revisions to the Act that required achievement of ‘best-available technology’ (BAT) limitations for toxic pollutants and ‘best conventional pollutant control technology’ limitations for conventional pollutants such as suspended solids, biological oxygen demanding (BOD) pollutants, faecal coliform and pH.<sup>32</sup> In addition, ‘new-source’ direct dischargers are subject to standards of performance for new sources.<sup>33</sup> These technology-based requirements are defined by EPA in extensive ‘effluent guidelines’ regulations that are set forth in 40 C.F.R. Part 400 et seq.

‘Indirect dischargers’ to publicly owned treatment works (POTWs) must comply with pre-treatment standards for pollutants that would interfere with or pass through the POTWs.<sup>34</sup> The new source and pre-treatment standards are generally identical to BAT limits for existing direct dischargers. Indirect dischargers are not required to obtain a NPDES permit, and instead the EPA pre-treatment standards themselves are enforceable against indirect dischargers.

### ***Scope of the Act***

The CWA is applicable to a ‘discharge of pollutants’ into ‘waters of the United States’ from a ‘point source’ (a discrete conveyance, such as a pipe or ditch). The meaning of ‘waters of the United States’ continues to be debated. In *Rapanos v. United States*, 547 U.S. 715 (2006), a 4-4-1 split decision, the plurality opinion by Justice Scalia opined that waters of the United States include wetlands only if they have a surface connection to traditional water bodies, namely oceans, streams and lakes. In a separate opinion, Justice Kennedy expressed the view that wetlands are covered by the statute if they significantly affect the chemical, physical and biological integrity of traditional navigable waters. In the Obama administration, the government took the position that a water body falls within the jurisdiction of the CWA if it satisfies the test in either the plurality opinion in *Rapanos* or Justice Kennedy’s separate opinion in *Rapanos*. As a result of this confusion, the scope of the Clean Water Act continues to generate controversy.

After *Rapanos*, new EPA regulations defining ‘waters of the United States’ were promulgated by the Obama administration in 2015. These regulations have been challenged in court and, at the time of writing, the lawsuits have not been decided. Subsequently, in the autumn of 2017, EPA announced an intent to repeal the existing definition and adopt a revised definition of ‘waters of the United States’ consistent with the views of Justice Scalia in the *Rapanos* case. In July 2018, EPA and the Department of the Army issued a notice of proposed rule-making to permanently repeal the 2015 Rule. The notice also states that the agencies are proposing to recodify the pre-2015 regulations while the agencies finalise a new definition of ‘waters of the United States’.<sup>35</sup> This is expected to trigger another series of lawsuits.

32 33 U.S.C. Section 1311(b).

33 33 U.S.C. Section 1316.

34 33 U.S.C. Section 1317(b).

35 83 Fed. Reg. 32227 (12 July 2018). On 11 December 2018, EPA and the Corps announced the new proposed rule. The agencies will take comment on the proposal for 60 days after publication in the Federal Register, <https://www.epa.gov/wotus-rule/step-two-revise>.

### ***Permit requirements***

Section 404 of the CWA gives the Corps the authority to issue permits for the discharge of dredged or fill material to waters of the United States.<sup>36</sup> Activities that may require Section 404 authorisation include land-clearing, construction of dams and certain farming activities. Preparation of an environmental impact statement in compliance with the National Environmental Policy Act and other statutes such as the Endangered Species Act may be triggered by a permit application, and compensatory mitigation may be required.<sup>37</sup> The statute contains exemptions for certain activities, including normal farming and ranching, and the maintenance of dykes, dams, irrigation and drainage ditches.

Dischargers to waters of the United States must obtain and comply with a permit under the National Pollutant Discharge Elimination System (NPDES) programme pursuant to Section 402 of the CWA.<sup>38</sup> Permits must be obtained from EPA or from a state that has an EPA-approved permit programme. NPDES permits contain effluent limitations that apply the technology and water-quality-based requirements of the Act, schedules of compliance and requirements for regular discharge monitoring and self-reporting of monitoring results to the appropriate regulatory authorities.

### ***Water quality requirements***

Water quality standards are adopted by the states and submitted to EPA for approval.<sup>39</sup> These standards must take into account the uses of a body of water, such as public water supply; propagation of fish and wildlife; recreation; and agricultural, industrial and other purposes, although in practice EPA has pressed the states to require all streams to meet standards for fishing and swimming, and to include an anti-degradation policy to protect existing uses and high-quality waters. EPA's criteria for reviewing state standards are set forth in 40 C.F.R. Sections 131.5 to 131.6.

Total maximum daily loads (TMDLs) (i.e., the maximum amount of a given pollutant that may be discharged to a water body from all sources in a day) are key to achieving water quality standards. Section 303(d) of the Act provides that the states shall identify waters that fail to achieve water quality standards, determine the TMDL needed to achieve water quality standards, and allocate these loads among dischargers in permits and water quality plans.<sup>40</sup> States are proceeding to develop TMDLs and implement them in NPDES permits.

Under Section 311 of the CWA, EPA has published regulations (40 C.F.R. Part 116) that determine the quantities of oil and hazardous substances the discharge of which may be harmful to the public health or welfare, known as 'reportable quantities'.<sup>41</sup> Section 311 does not cover discharges that are in compliance with or otherwise subject to an NPDES permit. A party that discharges a reportable quantity of a listed substance must notify the authorities, is subject to fines, and the federal government is authorised to arrange for the removal of oil or a hazardous substance and to assess the responsible party with the costs of removal.

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36 33 U.S.C. Section 1344.

37 33 C.F.R. Sections 325.2, 332.1(f).

38 33 U.S.C. Section 1342.

39 33 U.S.C. Section 1313(c)(2).

40 33 U.S.C. Section 1313(d).

41 33 U.S.C. Section 1321(b)(4).

### ***Enforcement and judicial review***

Section 309(a)(3) of the Act authorises EPA to issue an administrative order whenever it finds that a person is in violation of enumerated provisions of the Act or a permit implementing these provisions.<sup>42</sup> EPA may also sue for civil penalties for any violation of an NPDES permit, an EPA order, or the Act.<sup>43</sup> Section 309(c) of the CWA authorises EPA to seek criminal penalties against responsible persons for wilful or negligent violations and for knowingly making any false statement or report.<sup>44</sup>

### **iii Chemicals**

The Toxic Substances Control Act (TSCA) was enacted in 1976 and gave EPA authority to require testing to determine the effects of chemicals and to impose restrictions on new and existing chemicals where necessary to protect the public health and the environment. Significant amendments to TSCA, enacted in 2016, remain to be fleshed out by EPA in the years ahead and are discussed below.

The definition of a 'chemical substance' under Section 3(a)(A) of TSCA is broad and includes any organic or inorganic substance or any combination of such substances, including synthetic organic compounds, raw agricultural commodities, microorganisms, ores and minerals.<sup>45</sup> Food, food additives, drugs, cosmetics and medical devices, which are regulated under other laws, such as the Food, Drug and Cosmetic Act, are exempt from TSCA. Also, substances manufactured solely for export from the United States are exempt under Section 12(a) of TSCA, but the exporter must provide notice to EPA if the chemical is regulated under certain provisions of TSCA.<sup>46</sup>

Section 2(b) of TSCA authorises EPA to take action where chemicals present an unreasonable risk of injury.<sup>47</sup> EPA may take action unless the chemicals in question are regulated under another federal statute.

Section 4 of TSCA authorises EPA to promulgate regulations requiring manufacturers, importers and processors to test chemical substances that may present an unreasonable risk to health or the environment, or if there are insufficient data on the manufacture, use or disposal of the chemical, or if the chemical is produced in substantial quantities and there may be substantial human exposure or environmental release.<sup>48</sup> EPA has also negotiated consent agreements with companies and trade groups to provide test data on chemicals.<sup>49</sup>

### ***Pre-manufacture notice***

Under Section 5 of TSCA, a pre-manufacture notice must be submitted to EPA at least 90 days before the start of production or import of a new chemical or an existing chemical used for a significant new use. Existing chemicals are those currently or previously manufactured or processed in the United States and are listed on the TSCA inventory that EPA maintains. A new chemical is any chemical not on the TSCA inventory. Manufacturers and importers must

<sup>42</sup> 33 U.S.C. Section 1319(a)(3).

<sup>43</sup> 33 U.S.C. Section 1319(d) and (g).

<sup>44</sup> 33 U.S.C. Section 1319(c).

<sup>45</sup> 15 U.S.C. Section 2602(3)(a)(A).

<sup>46</sup> 15 U.S.C. Sections 2611, 2613.

<sup>47</sup> 15 U.S.C. Section 2601(b)(1) and (2).

<sup>48</sup> 15 U.S.C. Section 2603(a), (b).

<sup>49</sup> 40 C.F.R. Part 790, subpart D.

submit specific information in their notice to EPA, including chemical identity, impurities, production volumes, processing methods, intended uses, worker exposure and test data.<sup>50</sup> There are exemptions for new chemicals manufactured or imported in small quantities, and for test marketing of a new chemical.<sup>51</sup>

After a pre-manufacture notice is received, EPA has 90 days to review the company's notice, and can extend its review to 180 days for good cause. If EPA does not act within the review period, the company may begin to manufacture or import the substance. If EPA concludes that a chemical is hazardous or there is an unreasonable risk or unanswered safety questions, under TSCA Section 5(e) EPA may issue an order to prevent or limit manufacture of the chemical. Alternatively, EPA and the company submitting the pre-manufacture notice may negotiate a consent order providing for various control measures including use limits, labelling requirements, protective equipment for workers, and limits on releases to the environment.

Section 5(f) of TSCA allows EPA to take action if the agency determines that activities involving a new chemical present an unreasonable risk to health or the environment. In that event, EPA can publish a rule that limits or delays the manufacture, use or disposal of the chemical.<sup>52</sup>

### ***Existing chemicals***

For a chemical on the TSCA inventory, EPA can issue a 'significant new use rule' (SNUR), requiring that any company wishing to manufacture or process the chemical give EPA 90 days' prior notice. EPA may take regulatory action, upon receiving a SNUR notice, to control the proposed activity. Subsequent manufacturers or importers must observe such SNUR restrictions or submit their own SNUR notice to EPA at least 90 days before initiating activities inconsistent with the EPA restrictions.

EPA is authorised under TSCA Section 6 to impose restrictions based on a finding that the manufacture, processing, distribution, use or disposal of a chemical or mixture presents an unreasonable risk of injury to health or the environment.<sup>53</sup> The restrictions may include banning the substance or mixture, prohibiting or limiting certain uses, or labelling and other hazard notification requirements, taking into account a chemical's harm and the economic and social costs of the restriction. In addition, EPA may publish a regulation that is effective immediately if there is an imminent hazard.<sup>54</sup>

### ***Enforcement and record-keeping***

EPA may, under Section 7 of TSCA, file a suit in federal district court if the agency concludes that the substance or mixture presents an imminent hazard, namely an imminent and unreasonable risk of serious or widespread injury to health or the environment.<sup>55</sup> In such an action, the court can issue an order providing injunctive relief, including public notice of risks and a recall of the chemical or product.

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50 15 U.S.C. Section 2604(d)(1); 40 C.F.R. Section 720.50.

51 40 C.F.R. Sections 720.36.40, 720.50, 720.78.

52 40 C.F.R. Part 747, Part B.

53 15 U.S.C. Section 2605(a).

54 15 U.S.C. Section 2605(d).

55 15 U.S.C. Section 2606(a)(1).

Section 8 of TSCA authorises EPA to promulgate rules that require record-keeping and reporting of information concerning the health and environmental effects of chemicals or mixtures.<sup>56</sup> Section 8(c) of TSCA requires manufacturers, processors and distributors to maintain records of significant alleged adverse reactions to health or the environment.<sup>57</sup> Section 8(d) of TSCA also authorises EPA to require the submission of health and safety studies.<sup>58</sup> Any manufacturer, importer or distributor who obtains information indicating that a chemical presents a substantial risk of injury to health or the environment is required by Section 8(e) of TSCA to report the risk information to EPA within 15 days.<sup>59</sup>

EPA and US Customs regulations require importers to certify at the port of entry into the United States either that the substance is regulated by and complies with TSCA or that it is exempt or not subject to TSCA.<sup>60</sup>

Sections 15, 16 and 17 of TSCA provide for penalties for violations of TSCA and EPA's implementing regulations. EPA may also bring a lawsuit under Section 17 of TSCA to prevent violations or to compel actions required by the statute or to seize and condemn chemicals and articles containing chemicals that have been manufactured or distributed in violation of TSCA.

### ***TSCA reform legislation***

In June 2016, President Obama signed into law significant amendments to TSCA – the Frank R. Lautenberg Chemical Safety for the 21st Century Act, Public Law No. 114-182. The 2016 amendments clarify EPA's review authority for new and existing chemicals and the expected pace and prioritisation of regulatory efforts. The new law, includes improvements, such as:

- a* mandatory requirement for EPA to evaluate existing chemicals with clear and enforceable deadlines;
- b* new risk-based safety standard;
- c* increased public transparency for chemical information; and
- d* consistent source of funding for EPA to carry out the responsibilities under the new law.

One year later, on 22 June 2017, EPA announced a number of implementation activities that have enabled EPA to meet its first-year statutory responsibilities. EPA completed the following implementation activities as of that date:<sup>61</sup>

- a* a rule to establish EPA's process and criteria for identifying high-priority chemicals for risk evaluation and low-priority chemicals for which risk evaluation is not needed;
- b* a rule to establish EPA's process for evaluating high-priority chemicals to determine whether they present an unreasonable risk to health or the environment;
- c* a rule to require industry reporting of chemicals manufactured or processed in the United States over the past 10 years;

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56 15 U.S.C. Section 2607(a). See 40 C.F.R. Section 712.20.

57 15 U.S.C. Section 2607(c). See 40 C.F.R. Section 717.17.

58 15 U.S.C. Section 2607(d). See 40 C.F.R. Section 716.120.

59 15 U.S.C. Section 2607(e). See 56 Fed. Reg. 4128 (1991).

60 40 C.F.R. Section 707.20(b).

61 See: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/frank-r-lautenberg-chemical-safety-21st-century-act-5>.

- d* scope documents for the initial 10 chemicals for risk evaluation under the amended law, including how the evaluation will be conducted; and
- e* guidance for external parties interested in submitting draft risk evaluations for EPA consideration.

With respect to the review of existing chemicals, Section 4 of the 2016 Act directs EPA to first determine whether an unreasonable risk to human health and the environment exists, without consideration of costs. If an unreasonable risk is found, EPA is then to evaluate various regulatory options, including consideration of costs and benefits. Section 6 of the 2016 Act directs EPA to prioritise existing chemicals as ‘high priority’ or ‘low priority’. EPA must give priority to known human carcinogens, chemicals with high acute and chronic toxicity, and certain persistent, bioaccumulative and toxic chemicals. EPA must ban, phase out or impose restrictions on any high-priority chemical that poses an unreasonable risk.

In September 2018, EPA released a white paper: ‘A Working Approach for Identifying Potential Candidate Chemicals for Prioritization.’ By December 2019, EPA must designate at least 20 chemical substances as high priority for risk evaluation and 20 chemical substances as low priority for which risk evaluation is not currently warranted. In 2019, EPA plans to open 73 chemical-specific public dockets, one for each of the remaining chemicals on the 2014 TSCA Work Plan.<sup>62</sup>

The review of new chemicals is changed under the 2016 Act. Under Section 5 of the 2016 Act, EPA is required to review and affirmatively approve new chemicals and significant new uses before they are introduced into commerce. EPA must determine whether the chemical is likely to present an unreasonable risk of injury to health or the environment under the conditions of use.<sup>63</sup> If EPA makes a finding of unreasonable risk, it must take regulatory action. The new term ‘condition of use’ is defined as the circumstances under which a chemical is manufactured, processed, distributed in commerce, used or disposed of. The 2016 Act may thus have an increased impact on downstream users.

Companies will wish to review the chemicals they use, process or distribute and be prepared to participate in EPA’s implementation of this new law. More information on EPA’s progress to date and a full list of all the TSCA implementation activities can be found online.<sup>64</sup>

### **FIFRA**

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)<sup>65</sup> provides for federal regulation of pesticide distribution, sale and use. All pesticides distributed or sold in the United States must be registered (licensed) by EPA. Before EPA may register a pesticide under FIFRA, the applicant must show, among other things, that using the pesticide according to specifications ‘will not generally cause unreasonable adverse effects on the environment’. EPA may take enforcement actions against the distribution or sale of unregistered pesticides,

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62 <https://www.epa.gov/newsreleases/epa-takes-first-steps-identifying-next-group-chemicals-risk-evaluation-under-tsca>.

63 EPA’s determination of chemicals ‘not likely to present an unreasonable risk’ following review of pre-manufacture notifications can be found at: <https://www.epa.gov/reviewing-new-chemicals-under-toxic-substances-control-act-tsca/chemicals-determined-not-likely>.

64 <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/frank-r-lautenberg-chemical-safety-21st-century-act-5>.

65 7 U.S.C. Section 136.

registered pesticides whose composition differs from that in the product's registration, and registered pesticides that are misbranded or adulterated. EPA may also stop the sale of or seize pesticide products that do not meet FIFRA requirements.

#### **iv Solid and hazardous waste**

The Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 et seq., establishes a cradle-to-grave programme regulating the management of hazardous wastes that is directed by EPA and implemented in large part by the various states. The RCRA programme identifies a broad universe of waste materials as hazardous, and regulates the handling of this waste by generators, transporters, and treatment, storage and disposal facilities. RCRA also imposes corrective action requirements. However, unlike the Superfund statute, 42 U.S.C. Section 9601 et seq., which focuses on remedying past waste disposal at abandoned sites, RCRA addresses the ongoing management of hazardous wastes at manufacturing plants and other facilities. Most states have been authorised by EPA to implement RCRA within their respective state, and states can also impose more stringent requirements than required by federal law.

RCRA was originally enacted in 1976. In 1984, Congress amended RCRA extensively to authorise the regulation of underground tanks, the clean up of contaminated areas of industrial sites not covered by the original law and increased restrictions on the disposal of wastes on land.

#### ***Definition of hazardous waste***

Subtitle C of RCRA regulates 'solid waste' that is 'hazardous'. Under RCRA, solid waste is any garbage, refuse, sludge or other discarded material, including solid, liquid, or gaseous material that is contained.<sup>66</sup> EPA's regulation defining the term solid waste includes secondary materials that are incinerated for energy recovery and disposed of on the ground.<sup>67</sup> The definitions distinguish between types of materials (sludges, by-products) and types of activities (reclamation, reuse and disposal). The definition excludes industrial wastewater discharges subject to the Clean Water Act permit programme,<sup>68</sup> and recycled materials, such as secondary materials that are returned to the original process and reused.<sup>69</sup>

Once a waste is determined to be solid waste, it is considered 'hazardous' if the waste exhibits one of four characteristics (ignitability, corrosivity, reactivity or toxicity) as determined in tests for these kinds of waste.<sup>70</sup> The toxicity characteristic is determined by the Toxicity Characteristic Leaching Procedure designed to simulate the leaching that would occur at a municipal landfill.<sup>71</sup> Waste is also deemed hazardous if it is specifically listed by EPA as hazardous.<sup>72</sup> The Agency has also listed non-specified sources (F-listed), specific industrial processes (K-listed), and discarded commercial chemical products and pesticides (P and U wastes).<sup>73</sup> Household waste, agricultural waste used for fertilisers and mining waste

66 42 U.S.C. Section 6903(27).

67 40 C.F.R. Sections 261.2, 261.4.

68 40 C.F.R. Section 261.4(a)(1).

69 Id. Sections 261.2(e), 261.4(a)(8).

70 40 C.F.R. Sections 261.21–.24.

71 40 C.F.R. Part 261, App. II.

72 42 U.S.C. Section 6921(b).

73 40 C.F.R. Sections 261.31, 261.32, and 261.33.

is exempt.<sup>74</sup> EPA has decided not to regulate oil and gas industry exploration and production wastes, and mineral extraction, beneficiation and certain mineral processing. Under EPA's mixture rule, any solid waste that is mixed with a listed hazardous waste remains a hazardous waste.<sup>75</sup> In addition, any waste resulting from the treatment, storage or disposal of any listed waste is a hazardous waste.<sup>76</sup>

### ***Obligations of generators***

Generators of hazardous waste must notify EPA of the initiation of hazardous waste activities, obtain an EPA identification number and properly store hazardous wastes. Waste must be properly labelled and be in proper containers for shipment pursuant to Department of Transportation (DOT) requirements.<sup>77</sup> Generators must use a manifest to track hazardous waste shipments,<sup>78</sup> and maintain records and submit biennial reports that summarise their waste generation activities.

Generators may accumulate wastes on site for 90 days without being subject to all of the requirements for treatment, storage and disposal facilities. They must, however, label the waste as hazardous and note the date when accumulation begins.<sup>79</sup> Generators that produce no more than 100 kilograms of hazardous waste per month are exempt.<sup>80</sup>

### ***Obligations of transporters***

Transporters of hazardous waste must comply with the EPA regulations in 40 C.F.R. Part 263, which require that they obtain EPA identification numbers, use proper containers and implement the hazardous waste manifest system by ensuring that the manifest accompanies the waste to its next point of delivery.<sup>81</sup> If a discharge of hazardous waste occurs during transport, the shipper must provide notice to the EPA National Response Center and must take appropriate action to protect human health and the environment, including clean up of the discharge.<sup>82</sup>

Transporters are also extensively regulated by the US Department of Transportation under the Hazardous Materials Transportation Act, 49 U.S.C. Section 1801 et seq. The DOT regulations applicable to transportation of hazardous waste are contained in 49 C.F.R. Part 171.

### ***TSDF facilities***

Unless otherwise exempt, all facilities that treat, store or dispose of hazardous waste must obtain a permit.<sup>83</sup> Treatment, storage and disposal facilities (TSDFs) are subject to several types of operating and design standards: general facility standards, closure and post-closure care standards, and unit-specific standards. These standards are contained in 40 C.F.R.

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74 40 C.F.R. Sections 261.4(b)(1), (2), and 42 U.S.C. Section 6921(b)(2), (3).

75 40 C.F.R. Section 261.3(a)(2)(iv).

76 45 Fed. Reg. 33096 (1980).

77 40 C.F.R. Sections 262.30–33.

78 40 C.F.R. Sections 262.20–23.

79 40 C.F.R. Section 262.34(a).

80 40 C.F.R. Section 261.5(b), (g).

81 40 C.F.R. Section 263.20.

82 40 C.F.R. Sections 263.30–31.

83 42 U.S.C. Section 6925.



Part 264. The general standards require that each TSDF obtain an identification number, obtain or conduct waste analyses, implement security measures, schedule regular inspections and provide personnel training.<sup>84</sup> Each TSDF must have a closure plan that includes procedures for removing contaminated soil, cleaning equipment and performing necessary sampling and analysis.<sup>85</sup>

Each TSDF must demonstrate its financial ability to meet closure and post-closure obligations as well as third-party liability.<sup>86</sup> There are several means to demonstrate financial ability, including self-insurance, insurance policies, surety bonds and parent company guarantees.<sup>87</sup>

EPA has established specific standards for containers, tanks, land disposal facilities, miscellaneous units, incinerators, furnaces and boilers. Permitted tank systems used to manage hazardous waste must have secondary containment systems and leak detection.<sup>88</sup> Incinerators must demonstrate an ability to meet a destruction efficiency of 99.99 per cent of the principal organic hazardous constituent identified in the permit.<sup>89</sup> Landfills generally must have double liners, a leachate collection system and groundwater monitoring.<sup>90</sup> Surface impoundments, including lagoons and ponds, are subject to similar requirements.<sup>91</sup> In 1984 Congress directed that waste not be disposed of on land unless it is treated to meet standards promulgated by EPA.<sup>92</sup>

### ***Enforcement***

EPA has authority under RCRA Section 7003 to require persons to take action necessary to address an 'imminent and substantial endangerment to health or the environment'.<sup>93</sup> As revised in 1984, Section 3004(u) of RCRA also allows EPA to require corrective action for releases from solid waste management units for any person seeking a RCRA permit after 1984, regardless of when the waste was placed in the unit.<sup>94</sup> Section 3004(v) authorises EPA to require corrective action beyond the boundary of a TSDF where necessary to protect human health and the environment.<sup>95</sup>

### ***Underground storage tanks***

In 1984 Congress established a comprehensive programme for regulating underground storage tanks (USTs) containing petroleum products and hazardous substances under CERCLA but excluding hazardous wastes under RCRA.<sup>96</sup> Owners of USTs are required to construct them to maintain structural integrity, to install leak detection systems, to report releases of regulated substances, to take corrective action for releases and to demonstrate

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84 40 C.F.R. Sections 265.11–.16.

85 40 C.F.R. Sections 264.112 and 265.112.

86 40 C.F.R. Parts 264, 265, subpart H.

87 40 C.F.R. Sections 264.143–.145, 265.143–.145.

88 40 C.F.R. Sections 264.191–.196 and 265.191–.196.

89 40 C.F.R. Sections 264.343–.347.

90 40 C.F.R. Sections 264.301 and 265.301.

91 40 C.F.R. Sections 264.220 and 266.220.

92 42 U.S.C. Section 6924(d), (e)(1), (g)(5).

93 42 U.S.C. Section 6973.

94 42 U.S.C. Section 6924(u).

95 42 U.S.C. Section 6924(v).

96 42 U.S.C. Section 6991.

financial responsibility.<sup>97</sup> The statute contains several exemptions, including tanks used to store heating oil for consumptive use on the premises where stored, and storage tanks in an underground area such as a basement that are above the surface of the floor.<sup>98</sup>

### ***Non-hazardous waste***

For non-hazardous waste, states are directed to develop solid waste management plans and to eliminate the open dumping of solid waste.<sup>99</sup> Landfills that do not meet EPA design criteria and engage in practices that constitute open dumping are banned.<sup>100</sup> Medical waste is regulated under Subtitle J of RCRA, 42 U.S.C. Section 6992 et seq., which requires record-keeping and manifesting. EPA has promulgated regulations applicable to generators, transporters and processors of used oil. 40 C.F.R. Part 279, subparts C, E and F. EPA has also published detailed regulations for the use and disposal of sewage sludge.<sup>101</sup>

## **v Contaminated land**

Unlike most federal environmental statutes, which contain regulatory programmes designed to prevent future pollution, CERCLA addresses releases or threats of releases of hazardous substances as a result of past waste disposal.<sup>102</sup>

### ***Overview***

Section 101(14) of CERCLA defines a ‘hazardous substance’ as a substance falling within six categories regulated under other environmental statutes. EPA has codified the list of CERCLA hazardous substances in 40 C.F.R. Part 302. This list is quite lengthy, and includes natural substances as well as man-made chemicals.

CERCLA gives the government two basic enforcement tools. EPA may seek to have responsible parties perform remedial action voluntarily or order them to perform remediation under Section 106 of the Act.<sup>103</sup> Alternatively, EPA may arrange to have the necessary remedial action performed by an outside contractor and then seek cost reimbursement from responsible parties.<sup>104</sup>

The statute provides that, where there is a release or threatened release of a hazardous substance from a facility that causes the incurrence of response costs, responsible parties are liable to the government for all costs of removal or remedial action incurred by the US government or a state, and damages for injury to, destruction of, or loss of natural resources.<sup>105</sup> The terms ‘removal action’ and ‘remedial action’ are defined broadly in the Act.<sup>106</sup> The government may not undertake response action as to naturally occurring substances, or for

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97 42 U.S.C. Section 6991(b); 40 C.F.R. Part 280.

98 42 U.S.C. Section 6991(1).

99 42 U.S.C. Section 6943.

100 40 C.F.R. Part 257, 42 U.S.C. Section 6945(a).

101 40 C.F.R. Parts 257, 403, and 503.

102 Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 9601 et seq. (CERCLA).

103 42 U.S.C. Section 9606.

104 42 U.S.C. Section 9607(a).

105 42 U.S.C. Section 9607(a).

106 42 U.S.C. Section 9601(23) and (24).

exposure within residential buildings or business or community structures.<sup>107</sup> Courts have held that claims for lost property values, and loss of income or profits are not recoverable response costs under CERCLA. See *Wehner v. Syntex Corp.*, 681 F. Supp. 651, 653 (N.D.Cal. 1987). Similarly, the courts have held that CERCLA does not authorise parties to bring suits for recovery of personal injuries.<sup>108</sup>

### ***Liability and defences***

Section 107(a) of the Act establishes four categories of responsible parties:

- (1) *the owner and operator of a vessel or a facility;*
- (2) *any person who at the time of disposal of any hazardous substance owned or operated the facility;*
- (3) *any person who by contract, agreement or otherwise arranged for disposal or arranged with a transporter for disposal of hazardous substances owned or possessed by such person; and*
- (4) *any person who accepts hazardous substances for transport to disposal facilities or sites selected by such person.*

The third category of ‘arranger’ or ‘generator’ liability has been most frequently applied to manufacturing companies. A company is liable as an arranger if it takes intentional steps to dispose of a hazardous substance.<sup>109</sup>

The liability established by Section 107 is subject to the following defences: an act of God; an act of war; and an act or omission of a third party.<sup>110</sup> Defendants have rarely relied upon the first two defences. The third defence applies to damage caused solely by an act or omission of a third party ‘other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly with the defendant’.

Section 107(b) of CERCLA provides an affirmative defence to current owners of contaminated property if the release and the damage were wholly caused by an act or omission of a third party other than one whose act or omission occurred in connection with a contractual relation with the defendant. The statute also excludes innocent landowners from the definition of ‘contractual relationship’.<sup>111</sup> This provision allows a defendant to avoid liability if it can show that the property was acquired after the disposal took place and the defendant ‘did not know and had no reason to know’ that hazardous substances had been disposed of on the property.

Although the statute as enacted in 1980 was silent on the issue, the courts have held, based on general tort law principles, that if two or more defendants cause an indivisible harm, ‘each is subject to liability for the entire harm’.<sup>112</sup> Subsequent judicial decisions have adopted the approach in *Chem-Dyne* and have held that the statute imposes strict, joint and several

<sup>107</sup> 42 U.S.C. Section 9604(a)(3).

<sup>108</sup> *Brewer v. Ravan*, 711 F. Supp. 784 (D.N.J. 1989).

<sup>109</sup> *Burlington Northern & Santa Fe Railway Co. v. United States*, 556 U.S. 599 (2009).

<sup>110</sup> 42 U.S.C. Section 9607(b).

<sup>111</sup> 42 U.S.C. 9601(35)(A).

<sup>112</sup> *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 810 (S.D. Ohio 1983).

liability to the government (see e.g., *United States v. Monsanto*, 858 F.2d 160 (4th Cir. 1988)). The courts have also held that liable parties at a multiparty Superfund site may avoid joint and several liability if a court finds a ‘reasonable basis’ to apportion their liability.<sup>113</sup>

CERCLA provides a right of contribution. Section 113(f) of the Act, added in 1986, expressly provides that ‘[a]ny person may seek contribution from any other person who is liable or potentially liable under Section 9607(a). . . .’ (42 U.S.C. Section 9613(f)(1)). Section 113(f)(2) provides contribution protection for parties who have settled their CERCLA liability with the United States or a state. In addition, companies may be able to recover clean up costs from their insurance carriers. The terms of such insurance policies have changed over time, and the obligations of carriers to indemnify for Superfund losses will depend on the language of applicable policies.

Section 113(f)(1) of CERCLA states that, in resolving contribution claims, the courts may ‘allocate response costs among liable parties using such equitable factors as the court determines are appropriate’. Judicial decisions and commentators have focused on the amount of hazardous waste involved, the degree of toxicity of the waste, the degree of involvement by the parties, the degree of care exercised by the parties and the degree of cooperation with government officials (e.g., *United States v. A&F Materials*, 578 F. Supp. 1249, 1256 (S.D. Ill. 1984)).

### ***Clean up of contaminated sites***

Since the passage of CERCLA in 1980, EPA has identified thousands of inactive hazardous waste disposal sites as potential sites for CERCLA remediation. These sites are screened, and priority sites for action are listed on the National Priorities List. Once EPA determines that remedial measures may be necessary, the agency undertakes various steps to study the site further, to select a remedy and to design and implement the remedy.

Section 105 of CERCLA provides for the establishment of a national contingency plan (NCP).<sup>114</sup> The plan sets forth the organisational structure, procedures and standards for responding to releases of hazardous substances under CERCLA. The NCP is set forth in 40 C.F.R. Part 300. Sites included on the NPL become eligible for government-financed remedial action.<sup>115</sup>

In order to select and implement a remedial action, EPA must go through several steps, including a remedial investigation and feasibility study. The remedial investigation (RI) is a process to determine the nature and extent of the problem at a site.<sup>116</sup> The feasibility study (FS) develops and evaluates appropriate remedial alternatives using nine criteria, including overall protection of human health and the environment, compliance with applicable or relevant and appropriate requirements, long-term effectiveness and permanence, reduction of toxicity, mobility or volume through treatment, implementability, cost, and state and community acceptance.<sup>117</sup>

Once the RI/FS is completed, EPA reviews the proposed remedial alternatives and selects a remedy after circulating a draft and considering public comments. The agency’s

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113 *Burlington Northern & Santa Fe Railway Co. v. United States*, 556 U.S. 599 (2009).

114 42 U.S.C. Section 9605.

115 42 U.S.C. Section 9604(a).

116 40 C.F.R. Section 300.430(d).

117 40 C.F.R. Section 300.430(e).

final remedy is embodied in a document called a record of decision (ROD). The ROD must document all the facts, analyses and policy determinations considered in the selection of the remedy.<sup>118</sup>

### ***Settlement and enforcement***

Responsible parties may settle with the government by paying appropriate response costs or by agreeing to perform the remedy. Agreements to perform the remedy must be embodied in a consent decree.<sup>119</sup> CERCLA provides that a party who has entered into an administrative or judicially approved settlement with the government ‘shall not be liable for claims for contribution regarding matters addressed in the settlement’.<sup>120</sup>

Alternatively, Section 106(a) of CERCLA authorises the government to issue orders requiring parties to undertake specified remedial actions. Any person who without sufficient cause fails or refuses to comply with such an order is subject to fines and may be liable for damages of three times the amount of costs incurred by the government as a result of failure to take action.

The government may also undertake to perform the clean-up actions required and then bring an action in federal court under Section 107(a) of CERCLA seeking to recover its response costs at a site. CERCLA provides that judicial review of any issues concerning the adequacy of any response action taken by EPA shall be based on the administrative record.<sup>121</sup>

In 2017, EPA announced recommendations in response to its former administrator Scott Pruitt’s request for steps to improve the Superfund programme. The recommendations reflect the following priorities:

- a* expediting cleanup and remediation;
- b* reinvigorating responsible party cleanup and reuse;
- c* encouraging private investment;
- d* promoting redevelopment and community revitalisation; and
- e* engaging partners and stakeholders.<sup>122</sup>

Affected parties will wish to observe how these policies are implemented in practice.

### ***Natural resource damages***

CERCLA authorises the government to recover damages to natural resources. A claim for damage to natural resources must be brought by the designated trustees for natural resources acting on behalf of the public.<sup>123</sup> The designated federal trustees are the Secretaries of Interior, Commerce, Defense, Agriculture and Energy.<sup>124</sup> The states have generally also designated one or more trustees for state resources.

The elements of liability for natural resources damages are the same as those under Section 107(a) of CERCLA. In addition, the trustee must show that there has been an ‘injury to, destruction of, or loss of natural resources resulting from’ a release of hazardous

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118 40 C.F.R. Section 300.430(f)(5).

119 See 42 U.S.C. Section 9622(d)(1)(A).

120 42 U.S.C. Sections 9613(f)(2), 9622(h)(4).

121 42 U.S.C. Section 9613(j).

122 [https://www.epa.gov/sites/production/files/2017-07/documents/superfund\\_task\\_force\\_report.pdf](https://www.epa.gov/sites/production/files/2017-07/documents/superfund_task_force_report.pdf).

123 42 U.S.C. Section 9607(f)(1).

124 See 52 Fed. Reg. 2023 (1987).

substances.<sup>125</sup> Section 107(f) of CERCLA bars the recovery where the damage and the release causing the damage occurred wholly before 11 December 1980, the date CERCLA was enacted.<sup>126</sup> Section 101(16) of CERCLA defines natural resources to mean ‘land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources’ belonging to the United States or a state.<sup>127</sup>

The statute does not explicate how to measure natural resource damages. The Department of the Interior promulgated regulations pursuant to 42 U.S.C. Section 9651(c) for the assessment of natural resource damages.<sup>128</sup> The trustees are not bound to use the Interior Department’s damage assessment regulations, and increasingly use a habitat equivalency analysis to assess damages.

## VII CLIMATE CHANGE

The Clean Air Act as enacted in 1970 and revised in 1990 does not specifically address the issue of climate change from greenhouse gases. However, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the US Supreme Court held that greenhouse gases (GHG) fit within the Act’s definition of an air pollutant that EPA may regulate. Subsequently, in December 2009 EPA issued a finding that six classes of GHGs endanger public health and welfare by causing global climate change, and that the GHGs emitted from new motor vehicles contribute to GHG pollution. Subsequently, in May 2010, EPA promulgated GHG emission standards for light-duty motor vehicles in model years 2012 to 2016.

EPA also determined that the Clean Air Act required major stationary sources of greenhouse gases to obtain construction and operating permits. To reduce regulatory burdens, in December 2010, EPA issued Timing and Tailoring Rules (PSD and Title V permitting). The Tailoring Rule focuses on the largest greenhouse gas emitters: power plants, refineries and cement production facilities.

In June 2013, President Obama announced a Climate Action Plan containing the following key components:

- a* develop new rules to cut carbon pollution;
- b* prepare the United States for the impacts of climate change by helping state and local governments strengthen roads, bridges and shorelines from severe weather; and
- c* lead international efforts by galvanising international action to significantly reduce emissions, prepare for climate impacts and drive progress through the international negotiations.

Pursuant to these objectives, on 13 May 2010, EPA set greenhouse gas emissions thresholds to define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programmes are required for new and existing industrial facilities. This final rule ‘tailors’ the requirements of these Clean Air Act permitting programmes to limit covered facilities to the nation’s largest greenhouse gas emitters: power plants, refineries and cement production facilities.

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125 42 U.S.C. Section 9607(a)(4)(C).

126 42 U.S.C. Section 9607(f)(1).

127 42 U.S.C. Section 9601(16).

128 56 Fed. Reg. 19756 (1991). 43 C.F.R. Part 11.

### ***Clean Power Plan***

On 3 August 2015, the EPA issued the Clean Power Plan, which was designed to cut pollution from the power sector by 32 per cent below 2005 levels, while also cutting smog- and soot-forming emissions by 20 per cent. The final Clean Power Plan for Existing Power Plants is a state-based programme under Section 111(d) of the Clean Air Act for existing sources with EPA establishing guidelines and states then designing programmes that fit in those guidelines to get the needed reductions in CO<sub>2</sub>. EPA also published a proposed Federal Plan for the Clean Power Plan that serves as a model rule for those states that are developing their own Clean Power Plan state plans. Finally, EPA promulgated final standards of performance to address CO<sub>2</sub> emissions from new, modified and reconstructed power plants. These Clean Power Plan regulations were stayed by the US Supreme Court and are being challenged in the US Court of Appeals in Washington, DC.

In August 2018, EPA issued proposals to replace Obama's climate change regulations with less onerous requirements. The proposed replacement, the Affordable Clean Energy rule, focuses 'on-site, heat-rate efficiency improvements' to lower greenhouse gas emissions from coal-powered and other currently operating power plants. It would provide states with leeway to set limits for plants within their borders. Several states and municipal governments, including New York, California and Los Angeles, submitted comments to EPA opposing the proposal, arguing that it allows an increase in pollution that would harm human health. Final action on regulations to replace the existing Clean Power Plan will likely trigger litigation, and the validity of such regulations will ultimately be decided by the federal courts.

### ***Oil and Natural Gas Air Pollution Standards***

On 12 May 2016, EPA issued three final rules that together will curb emissions of methane, smog-forming VOCs and toxic air pollutants such as benzene from new, reconstructed and modified oil and natural gas sources, while providing greater certainty about Clean Air Act permitting requirements for the industry. EPA estimates that the rules will reduce methane emissions by 510,000 short tons of methane in 2025, the equivalent of reducing 11 million metric tons of CO<sub>2</sub>.

However, on 12 June 2017, the Trump EPA proposed a two-year stay of the fugitive emissions, pneumatic pump and professional engineer certification requirements in the rule while the agency reconsiders them.

### ***Transportation or mobile sources***

EPA and the National Highway Traffic Safety Administration were taking coordinated steps to enable the production of a new generation of clean vehicles – from the smallest cars to the largest trucks – through reduced greenhouse gas emissions and improved fuel use. Together, the enacted and proposed standards were expected by EPA to save more than 6 billion barrels of oil through 2025 and reduce more than 3,100 million metric tons of carbon dioxide emissions. However, since the election, EPA has announced that it is reconsidering the current fuel-efficiency standards for cars and trucks.

On 11 August 2018, EPA announced, for public comments, proposed revisions to the fuel economy standards that would freeze the prior Obama-era standards after 2021 and also revoke the ability of California and other states to set their own rules.<sup>129</sup>

### ***Renewable Fuel Standard programme***

In August 2018, EPA proposed to freeze the average auto fuel economy after 2012 at 37 miles per gallon. This contrasts with the 54 miles per gallon standard previously required by 2025, which would have spurred increased production of electric vehicles. The EPA proposal would also revoke a long-standing waiver allowing California to set stricter standards, which is opposed by California and other states that have followed the stricter California standards.

EPA is also responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. EPA estimates that by 2022 the Renewable Fuel Standard programme will reduce greenhouse gas emissions by 138 million metric tons, about the annual emissions of 27 million passenger vehicles, replacing about 7 per cent of expected annual diesel consumption and decreasing oil imports by \$41.5 billion.

In addition, various US state and local governments have adopted programmes to address climate change. A discussion of these efforts is beyond the scope of this chapter.

### ***Paris Agreement***

Two decades after creation of the UN Framework Convention on Climate Change, parties have reached a general political consensus in support of reducing global greenhouse gas emissions. As part of the December 2015 Paris Agreement, countries submitted nationally determined contributions for GHG mitigation. The governments agreed to a long-term goal of keeping the increase in global average temperature to well below 1.5°C above pre-industrial levels and to undertake rapid reductions thereafter in accordance with the best available science. The agreement traces the way to achieving this target. The agreement went into effect in November 2016. The Paris Agreement, with its emphasis on consensus-building, allows for voluntary and nationally determined targets. The specific climate goals are thus politically encouraged, rather than legally binding. On 1 June 2017, President Trump announced that the United States would cease participation in the 2015 Paris Agreement. Under the terms of the Paris Agreement, the earliest the United States may withdraw is 4 November 2020, four years after the Agreement came into effect in the United States.

In the meantime, a number of states and local government entities are proceeding with their own agendas with regard to climate change. On 10 September 2018, California Governor Jerry Brown signed 'The 100 Percent Clean Energy Act of 2018', which establishes a state policy that eligible renewable energy and zero-carbon resources supply 100 per cent of all retail sales of electricity in California by 2045. The Governor also issued a new executive order, EO B-55-18, establishing a new statewide goal 'to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter'.

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129 <https://www.epa.gov/newsreleases/us-epa-and-dot-propose-fuel-economy-standards-my-2021-2026-vehicles>.



## **VIII OUTLOOK AND CONCLUSIONS**

The relationship between energy and the environment intersects air and water quality programmes and ranges from the impacts of hydraulic fracturing to climate change to permits for energy projects, such as pipelines. During the presidential campaign, president-elect Trump promised to end the ‘war on coal’, the use of which has been in decline, largely owing to low-cost natural gas. He also criticised the Obama administration’s Climate Action Plan, the Clean Power Plan and the Paris Agreement on climate change. However, Trump’s energy plan also promised to ‘conserve our natural habitats, reserves and resources’. It remains to be seen to what extent the new administration will follow through on promises to scale back environmental regulation, but significant changes are already evident.

Efforts to roll back environmental regulations will be supported in some quarters and face resistance in others, and a number of EPA actions have already been challenged in the courts. Now that the Democrats have a majority in the US House of Representatives, one can expect increased scrutiny regarding EPA actions.

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Gianluca Atzori's practice focuses on environmental and administrative law issues, concerning, among other things, the management of environmental and administrative permitting and compliance.

He has provided legal advice in connection with EU and national environmental law to leading companies in the automotive, manufacturing, metals and mining, chemical, oil, energy and pharmaceutical industries, with particular reference to environmental issues arising from the operation of existing plants and the development of new projects, with third parties and public authorities.

In the context of M&A and financing transactions, Gianluca advises on the drafting of contracts, with specific regard to the management of environmental liabilities.

He also deals with sustainable development issues, including green public procurement and climate change, also with reference to the related financial and non-financial disclosures for large companies, banks and insurance institutions.

With respect to administrative law matters, he has provided legal advice to leading companies operating in heavily regulated environments, such as the supply of railway transportation services and the management of highways, airports, ports, gas and water distribution networks.

In 2017, Gianluca lectured at the Northwestern Pritzker School of Law on the Cleary Gottlieb Pro Bono Project 'International Environmental Protections During and After Armed Conflict', undertaken for Dr Marie Jacobsson, member of the United Nations International Law Commission.

In 2016, Gianluca advised the World Bank in relation to the Italian section of the worldwide project 'Enabling the Business of Agriculture', on the laws and regulations affecting agricultural productivity, market access and the policy environment for agriculture.

Gianluca regularly publishes on environmental law matters. He graduated *summa cum laude* from Cagliari Law School, where he also lectured in corporate human rights compliance and corporate social responsibility from 2011 to 2015. In May 2009, he obtained an LLM degree with honours in international human rights law from Northwestern Pritzker School of Law.

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During her LLM programme, she became a student researcher at the Pace Energy and Climate Center, dealing with current challenges relating to energy and climate change law and policy, such as the integration of distributed energy resources into the electric grid, and provision of access to clean energy opportunities to low- and moderate-income customers. She also worked as an adviser to the Permanent Mission of Costa Rica to the United Nations, providing support to initiatives on sustainable development, particularly the implementation of the Sustainable Development Goals.

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He frequently prepares reports on environmental issues, and advises on dealings with public authorities in relation to environmental matters (authorisations, environmental impact assessments, etc.). He has also participated in drafting environmental legislation.

The main international legal directories regard Carlos as a leading lawyer in environmental law.

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Mr Garrett advises clients on compliance and related business issues and has been extensively involved in administrative proceedings and litigation, including Supreme Court cases. Mr Garrett has spoken and written widely in the environmental area. He is the editor and principal author of *The Environmental Law Manual* and *The RCRA Practice Manual*, and is a contributing author to several books including *Environmental Litigation*, *The Clean Water Act Handbook*, *Litigators on Experts* and *Environmental Liability and Insurance Recovery*, all books published by the American Bar Association.

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After graduating from Istanbul University Law School in 1979, he won a Fulbright Scholarship in 1983 and earned LLM degrees from American University Washington College of Law in 1984 and the University of Virginia School of Law in 1985. Outside of his legal practice, Mr Hergüner holds various public policy and advisory roles. He is on the Advisory Board of the International Relations and European Union Center at the Union of Turkish Bar Associations in Ankara. He is a founder and the former President of the Istanbul chapter of the Washington, DC-based International Law Institute (ILI) and is currently an Advisory Council Member of the ILI Istanbul Chapter. He is a former President and current Advisory Board Member of the Corporate Governance Association of Turkey, and he is a member of the Turkish Industrialists and Businessmen Association.

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He has participated in the drafting of the Universal Declaration of Human Rights (DDHu) submitted to the United Nations with Corinne Lepage, and at the international *Monsanto* tribunal. His recent book, *Le contentieux climatique: une révolution judiciaire mondiale*, published by Bruylant Editions in April 2018, provides an in-depth study of climate justice litigation.

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Sanjeev has gained invaluable experience in constitutional law, general trade and commercial laws, and arbitration as well as laws relating to environment, energy, infrastructure and mining. Sanjeev has been a registered advocate on record with the Supreme Court of India since 2003. Sanjeev also has vast experience in international and domestic arbitration, environmental and energy laws. Handling complex environmental disputes before the National Green Tribunal of India as well as other Indian courts, along with alternative dispute resolution before national and international forums, has been one of his areas of expertise. He has successfully handled and argued cases before various forums and courts, including the Supreme Court of India, and before various state high courts and domestic and international arbitral tribunals. He has also been a speaker and a panellist at various conferences and seminars organised by august bodies such as the IBA, UIA, GAR, LCIA India and the Indian Council of Arbitration.

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*SKS Confidence Law Firm*

Sergey Kozlov is managing partner of SKS Confidence Law Firm. His main areas of specialisation are business law, energy law, environmental law, regulation law and information law. He has extensive experience in the field of legal consulting, project support and representation of interests in the courts.

Mr Kozlov graduated with honours from the Faculty of Law of Lomonosov Moscow State University (department of business law) and is a graduate of the School of German Law (DSG). He also studied jurisprudence at the University of Regensburg and the University of Tuebingen (Germany).

He is author of more than 30 scientific publications in Russian, German and English languages in leading scientific and practical publications on the issues of energy, business and information law. He is author and editor of several paragraphs of the book *Energy Law of Russia and Germany: A Comparative Legal Study* (2nd edition, edited by FJ Säcker and PG Lakhno, Berlin).

Mr Kozlov has extensive experience in the field of legal consulting, project support and representation of interests in the courts. He speaks Russian, English, German, Czech, Italian and Spanish. He is a member of the Association of Lawyers of Russia and the German-Russian Lawyers' Association (head of the working group on energy law).

## **VIVIANE OTSUBO KWON**

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Viviane Otsubo Kwon has more than 17 years of experience in environmental legal matters, especially involving contamination, licensing, climate change, solid waste and environmental assets (forest, water and biodiversity) in connection with traditional communities and indigenous people protocols.

For more than a decade, Viviane has been directly involved in fostering the environmental asset markets in Brazil. Viviane reviewed the Portuguese version of 'CBB Standards: Climate,

Community & Biodiversity Alliance – Project Design Standards’. She was instrumental in the landmark legal opinion of the first carbon credit project (REDD+) of the Brazilian Suruí indigenous people. She holds an LLB degree from Universidade de São Paulo. Viviane was awarded a scholarship from the Ministry of Education, Culture, Sports, Science & Technology of Japan from 2004 to 2008. She was a researcher at the School of Law, Kyushu University (Japan) on market-based mechanisms for environmental matters from 2004 to 2006. Viviane holds a master’s degree from the School of Law, Kyushu University (Japan) and postgraduate degree on technical and legal aspects of environmental compliance from CETESB (São Paulo Environmental Agency) Superior School from 2016 to 2018.

She is a member of the Brazil-Japan Comparative Law Institute and of the Working Group on Green Bonds, Green Finance and Financial Instruments for Social Impact Investment of the Laboratory for Finance Innovation, a project sponsored by the Securities Commission in Brazil, Inter-American Development Bank and Brazilian Association of Finance Institutions for Development.

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Jacquelyn MacLennan has practised EU environmental law in Brussels for more than 25 years. She represents major multinational corporations, governments, trade associations and NGOs, focusing on EU and international regulations (e.g., REACH, RoHS, WEEE, other chemicals and packaging regulation, environmental impact assessments, Aarhus Convention, Montreal Convention, Kyoto Convention and Paris Agreement, and emissions trading regulations). She also advises on EU competition law, trade law and internal market regulatory issues, and specialises in problems in the interface of environmental law with these other areas of EU law. Jacquelyn litigates regularly before the EU and UK courts, and represents clients before the European Commission. She is recognised as a Leading Lawyer: Environment: EU Regulatory – Belgium, Chambers Europe 2018. She regularly teaches EU law and speaks at conferences on the subject of environmental law. She is an Honorary Fellow at the Europa Institute of the University of Edinburgh.

## **ILONA MILLAR**

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Ilona Millar is an environmental and projects lawyer with a diverse range of experience in climate law and policy. Prior to Baker McKenzie, Ilona worked for the Foundation for International Environmental Law and Development and was former principal solicitor at the NSW Environmental Defender’s Office. Her particular focus is advising on the legal aspects of international and domestic climate change policy, carbon markets and emissions trading. Most recently, Ilona has been involved in advising government, large emitters, project developers and market participants on the design and implementation of carbon pricing schemes in Australia, including the Emission Reduction Fund and the Safeguard Mechanism.

## **LINA PIMENTEL GARCIA**

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Lina Pimentel is one of the leading lawyers in Brazil, recognised by environmental law rankings issued by various publications, including Chambers & Partners, the main multijurisdictional

research institution for law firms and attorneys. She has been working in environmental law for approximately 19 years and has extensive experience in environmental law within public, private and third sectors, including positions as in-house council with the state of São Paulo environmental agency (CETESB) and the sustainability department of a renewable energy company.

At CETESB, her activities involved issuing legal opinions in connection with legislative bills relating to various environmental matters including licensing, prevention of pollution and forestry. At Brenco, she coordinated sustainability issues during the start-up phase of the company, which included running licensing proceedings of five ethanol plants in three different states in the mid-west region of Brazil before state and federal authorities. She also coordinated the implementation of social, environmental and health and safety policies, as well as litigation matters involving licences.

At Mattos Filho, she focuses on a wide range of environmental matters, such as forest, indigenous people matters, solid waste, contamination, climate change, corporate liabilities and licensing. Lina is a vice-chair of the Environmental, Health and Safety Committee of the International Bar Association and a Co-Coordinator of the Environmental Law Committee of Centro de Estudos das Sociedades de Advogados.

## **MORITZ RADEMACHER**

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Moritz Rademacher is a senior associate in the Düsseldorf office of the law firm Hengeler Mueller. He studied law at the Universities of Bonn and Stellenbosch (South Africa), wrote his doctoral thesis on the management of unbundled energy companies (s.c.l.) under the supervision of Matthias Schmidt-Preuß and graduated as master of laws (LLM) with a specialisation in international trade law. His legal practice has a particular focus on the energy sector and other regulated industries, banking regulatory matters, food law, mining and environmental law, air traffic law and European law, which are also subjects of his regular publications.

## **SEPPE STAX**

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Seppe specialises in environmental law, renewable energy and regulatory matters, providing both public law and contracting advice. Seppe primarily focuses on renewable energy projects, including large solar and offshore wind farms. He also advises in real estate, finance, and corporate M&A deals, especially in regulated sectors such as waste, chemicals, oil or gas. Seppe was recently seconded to Allen & Overy's environment and regulatory corporate group in New York City and is registered as a Foreign Legal Consultant with the New York Bar. He was admitted to the Amsterdam Bar in 2013 after completing two LLM master's degrees and the honours education programme at the University of Nijmegen, the Netherlands, in 2012.

## **JOCHEM SPAANS**

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Jochem heads Allen & Overy Amsterdam's Environmental and Regulatory Law Team, specialising in (EU) environmental law, spatial planning law and general public law. He advises and litigates for US, European and multinational corporations on all aspects of

environmental law, including (IPPC) permit application and legal redress procedures and compliance matters. Recent experiences include various energy and industrial projects, including large on- and offshore wind farms, solar projects and (petro-)chemical industry sites. Besides, as a member of Allen & Overy's global REACH and WEEE & RoHS teams, Jochem has substantial experience advising on product stewardship matters. Jochem is an assistant-professor at the VU University Amsterdam, and a member of the Association for Environmental Lawyers, the Association for Environmental Law, the Association for Construction Law and the Association for Public Law. Jochem is ranked by independent legal directories, and teaches about environmental issues and liability in corporate transactions at the postgraduate Grotius Academy.

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Zeynep Tor is a senior associate in Hergüner's Corporate and M&A and Energy practice and concentrates on all aspects of projects and specialises in mergers and acquisitions, infrastructure projects, (e.g., cross-border pipeline projects and power plants), energy law, project financing, foreign investment matters as well as assistance with respect to numerous permitting-related issues (including environmental, operational and real estate permitting mechanisms), land acquisitions for cross-border infrastructure projects and general corporate law matters. Ms Tor was admitted to Istanbul Bar Association in 2008 and has been with Hergüner Bilgen Özeke Attorney Partnership since 2007. She graduated from Istanbul University School of Law in 2007 and holds an LLM degree from London School of Economics and Political Science (2012) with a specialisation in corporate and commercial law. She is a member of ILI-Istanbul, Istanbul International Law Association, London School of Economics and Political Science Alumni Association, and the American Robert College Alumni Association.

## **DENİZ TUNCEL**

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Deniz Tuncel has been with Hergüner for nine years where he is a partner in the firm's Corporate and M&A and Energy practice groups. Having joined the firm in 2009, Mr Tuncel was seconded to the Tokyo office of the prominent Japanese law firm of Mori & Matsumoto in 2014. His major work with Hergüner has included acquisitions of power generation plants, upstream and downstream oil and gas transactions (e.g., E&P and distribution business), and advising cross-border natural gas pipeline projects.

Mr Tuncel is a graduate of Istanbul University and received his first LLM degree from Istanbul Bilgi University and a second LLM degree from Harvard Law School. He is a member of the Istanbul Bar Association and the Harvard Law Alumni Association. He also serves on the supervisory board of the Istanbul chapter of the International Law Institute and the editorial board of the *Turkish Commercial Law Review*.

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Dirk Uwer is a partner of Germany's premier law firm Hengeler Mueller and Honorary Professor at Bonn-Rhein-Sieg University and lectures at several other universities. Following

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Marjet specialises in civil (real estate) law and spatial planning, environmental law and public law. She assists clients on real estate transactions and advises on environmental, permitting and zoning aspects. Marjet graduated in constitutional and administrative law as well as criminal law at the Vrije Universiteit of Amsterdam and joined Allen & Overy in April 2017. Prior to her law studies, Marjet also completed her bachelor's degree in forensic investigative sciences, including a focus on physics.

## **ROOPA VARADHARAJAN**

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Roopa Varadharajan is an environment and planning lawyer. She has advised major corporations, governments and industry bodies on a broad range of environmental and planning issues, including contaminated land, environmental licensing, waste management, planning approval pathways, development application appeals, voluntary planning agreements, compulsory acquisition and valuation objections. Roopa also has extensive experience in advising and appearing for developers and councils in environmental litigation matters in both the Land and Environment Court of New South Wales and the Supreme Court of New South Wales.

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Nawneet focuses on the firm's environmental advisory and dispute resolution practice. Besides representing clients in environmental matters before the National Green Tribunal and the Supreme Court of India, he advises clients on environmental issues in transactions across various sectors. He is an alumnus of NALSAR University of Law, Hyderabad and Lewis & Clark Law School, Portland, Oregon, United States. He is a member of the IUCN World Commission on Environmental Law and has received awards and fellowships from BELSPO, UKIERI, the Robert Bosch Foundation, the Asian Development Bank and MOEF&CC. Nawneet has authored two books published by LexisNexis and chapters in international publications. The foreword to his book on environmental law was written by Hon'ble Justice Swatanter Kumar, former chairperson of the NGT and former judge of the Supreme Court of India. Nawneet has also taught Environmental Law and Energy Law at the National Law University Delhi and at Jindal Global Law School, Sonapat. He has contributed columns and articles in publications like Hindu, Statesman, Business Standard,

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Ms Jiang Xinyan focuses on domestic and international litigation and arbitration in commercial matters, including disputes involving general commercial contracts, corporate and joint venture matters, trade, and recognition and enforcement of overseas arbitral awards.

Ms Jiang obtained her JD from Benjamin N. Cardozo School of Law in 2016, her LLB from Zhongnan University of Economics and Law and her BEc from Wuhan University in 2013. Ms Jiang is qualified in both China and New York. Prior to joining Jingtian & Gongcheng, Ms Jiang worked at the New York State Office of the Attorney General, Litigation Bureau.

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