

Environmental Due Diligence in Global Value Chains

A study to inform interpretation of key terms within a
cross-sectoral EU directive



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This study was commissioned by the following organisations:

Amnesty International, a global movement of more than 7 million people campaigning for a world where human rights are enjoyed by all. At EU level, it advocates to the EU policy-makers to influence how they set standards on human rights-related issues, to encourage them to change policies where necessary and react to unfolding human rights crises.

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European Coalition for Corporate Justice (ECCJ), a coalition of over 480 civil society organisations in Europe advocating for laws that guarantee corporate accountability and transparency, and ensure justice for people affected by corporate malpractice. ECCJ is guided by a vision of a sustainable world in which corporations respect human rights and the environment.

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Fern, an organisation based in the heart of the EU, dedicated to protecting forests and the rights of people who depend on them. Fern identifies the threats facing the world's forests, and work with affected peoples, social and environmental organisations and policy makers to devise and deliver solutions where the EU can make a difference.

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Forest Peoples Programme (FPP), a human rights organisation working alongside more than 60 partner organisations representing indigenous peoples and forest communities across the globe. It works with forest peoples to secure their rights to their lands and their livelihoods and supports them to promote an alternative vision of how forests should be managed. FPP's strategic approach is articulated upon five pillars: self-determination, access to justice, legal and policy reform and building solidarity.

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Friends of the Earth Europe, the largest grassroots environmental network in Europe, uniting more than 30 national organisations with thousands of local groups. Our Brussels office coordinates our network's joint campaigns, and pushes for action by the EU to protect people and planet. We are the European arm of Friends of the Earth International, a global federation uniting over 70 national member organisations, some 5,000 local activist groups, and over two million supporters around the world.

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Global Witness, an international NGO working to protect the planet's vital resources and help create a more sustainable, just and equitable world. Our campaigns focus on protecting climate-critical forests, keeping fossil fuels in the ground, holding companies to account, ending killings and violence against land and environmental defenders, improving natural resources governance and ending digital threats to democracy. Global Witness carries out hard-hitting investigations to expose the facts, and push for change.

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Recommendations

This Report considers how terms central to an environmental due diligence duty could be defined, providing a series of definitions to generate focused debate and discussion amongst stakeholders, legislators, and policymakers. It is to be stressed from the outset that a narrow interpretation should not be accorded to such terms for this would limit the scope of the duty's preventative and remedial capacities. These terms should be interpreted in such a manner that these capacities may be furthered.

I. Defining 'Adverse Environmental Impact'

It is proposed that the phrase '**adverse environmental impact**' be defined as *including*:

- (a) significant damage to the environment ('environmental damage'),
- (b) environmental nuisance,
- (c) injury or damage to property,
- (d) injury or harm to the health of any person,
- (e) impairment of the safety of any person,
- (f) loss of enjoyment of the normal use of property or land, and
- (g) interference with the normal conduct of economic activity.

(Adopted from Directive 2004/35/CE on environmental liability regarding the prevention and remedying of environmental damage [2004] OJ L143/56, article 2; the Environmental Protection Act R.S.O. 1990 of Ontario, Canada, section 1(1); and Environmental Protection Act 1994 (Qld), section 14(1), of Queensland, Australia).

The term '**environment**' would be defined as *including* (i.e. not a closed list):

- (a) all fauna and flora;
- (b) land, soil, water, air; and
- (c) the atmosphere;

(Adopted from OJ L 26/1 Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification), article 3).

The definition of 'adverse environmental impact' proposed in this Report addresses pure ecological damage under head (a): 'significant damage to the environment ('environmental damage)'. This would cover damage to the environment *as such* and would not require any person to have suffered damage or losses for the appropriate competent authority to bring an action against a defendant. Where a defendant was found liable under this head, they would be required by the competent authority (most likely located within the EU) to remedy the environmental damage, *wherever that may be*, limit its impacts, and prevent further damage. 'Traditional damage' is covered under heads (b)-(g). This includes damage caused to persons as victims resulting from an activity and may include damage to their property, bodily injury (including loss of life) and economic loss suffered by them. Damages, in the form of monetary payments, would be awarded to claimants where their civil action was proven successfully.

It is proposed that pure ecological damage ought to be addressed under the due diligence duty via a framework of administrative liability akin to the goals of the EU Environmental Liability Directive (ELD) but different to it in a material respect. The proposed framework offers a far wider interpretation of 'environment' than the ELD (which only covers protected habitats and species, land and water and humans where there is a significant risk to their health as a result of damage to land). Heads of liability (b)-(g) would be dealt with under a civil liability framework. Thus, this Report recommends introduction of a *mixed* (or hybrid) liability regime under the due diligence law.

II. Defining ‘Significant Damage to the Environment (‘Environmental Damage’)

It is proposed that the term ‘damage’, in the context of ‘significant *damage* to the environment’, is defined as per the ELD as a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly. Accurate information concerning the baseline condition of the affected natural resource prior to the harmful event is necessary if an adverse change is to be measured. However, this information may not be available in many instances. This is problematic as hypothetical reconstruction of the baseline condition will be disputed by a potential defendant where accurate measurable data is not available and the baseline condition is estimated based on generalised or otherwise unreliable data.

Nevertheless, as measurability may be viewed as essential to the efficacy of the framework of environmental liability implemented under a due diligence law, solutions must be found. For instance, it may be a requirement under the due diligence duty to obtain baseline conditions at higher risk sites or facilities in value chains. This may not capture the historic pollution existing at the site or facility and best efforts should be made to determine this with reasonable accuracy. However, as a ‘next best’ option, establishing an accurate present-day baseline would enable scientific assessment to clearly and defensibly determine if the relevant threshold had been met in relation to ‘future’ incidents.

It is also essential that an appropriate definition of ‘significant’ is arrived at by policy makers. Whilst the ELD leaves final determination of significance in each case to the relevant competent authority, guidance is provided in Annex I of the directive on the meaning of significant in the context of damage to protected species and natural habitats. Uncertainty over the meaning of the term ‘significant’ has been one of the main barriers to an effective and uniform application of the ELD. The European Commission is, however, expending a significant amount of time and resource to clarify some of the difficult terminology relating to these issues, with a view to rendering the ELD of greater operational use by competent authorities. The outcome of this process could inform how the term ‘significant’ is understood within the context of the proposed due diligence law.

As per Annex I of the ELD, significance has to be assessed by reference to: (1) the conservation status at the time of the damage; (2) the services provided by the amenities they produce; and (3) the habitats’ or species’ capacity for natural regeneration. It should be determined through measurable data such as:

- the number of individuals, their density or the area covered,
- the role of the particular individuals or of the damaged area in relation to the species or to the habitat conservation, the rarity of the species or habitat,
- the species’ capacity for propagation, its viability or the habitat’s capacity for natural regeneration,
- the species’ or habitat’s capacity to recover within a short time, without any intervention other than increased protection measures, to a condition deemed equivalent or superior to the baseline condition.

It is important to observe that, according to Annex I, damage with a proven effect on human health *must* be classified as significant damage. This could inform our understanding of the meaning of ‘significant’ damage to the environment through recognition that such an outcome would be deemed to exist where there was evidence that it had a proven effect on human health.

III. Environmental Crime

Criminal law measures may be appropriate for the most egregious actions, evidencing social disapproval of a qualitatively different nature compared to administrative penalties or a compensation mechanism under civil law. It may be pertinent where the conduct complained of was unlawful and committed *intentionally* or with at least *serious negligence*. 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 might provide a suitable model from which to develop such measures.

1. Introduction and Context

This Report seeks to inform development of a proposed mandatory cross sectoral due diligence duty in global value chains under European Union (EU) law. The OECD, a leading figure in the development of international best practice in this area, has indicated that the purpose of due diligence is ‘first and foremost’ to avoid causing or contributing to adverse impacts on people, the environment and society, and to seek to prevent such impacts through business relationships.¹ However, when they cannot be avoided, enterprises ought to mitigate those impacts, prevent their recurrence and remediate them.² And, following the lead of the United Nations’ *Guiding Principles on Business and Human Rights* (UNGPs), the proposed duty would be expected to capture impacts that the enterprise’s own activities had caused or contributed to (e.g. through its subsidiaries), and those directly linked to its operations, products or services by their *business relationships* (e.g. through its contractors/suppliers).³

The efficacy of such a duty, specifically its ability to hold EU-based parent companies *accountable* when the activities of their subsidiaries or affiliates have resulted in adverse impacts to people, the environment and society transnationally, will require the legal framework to have an extraterritorial reach (i.e. be applicable beyond the EU). In the absence of this, the law regulating the liabilities of each company – the parent company, its subsidiaries and affiliates in the value chain – will be national. Thus, for example, when a multinational enterprise (MNE) comprised a parent company incorporated in Spain, with subsidiaries in India, Brazil and Zambia, the liability of these companies would be governed by Spanish, Indian, Brazilian, and Zambian law, respectively. Typically, national law standards for enabling a claimant to bring a civil claim against a company vary between jurisdictions, meaning that whilst some victims may be able to hold a company accountable for damages, others may not.⁴ MNEs may even exploit different legal regimes to their advantage and select those countries with weak governance systems as suitable bases from which to operate.⁵ It may be considered fundamentally unjust for victims from certain countries to have their claims for compensation denied when those in other jurisdictions may be entitled to compensation.

A cross-sectoral due diligence duty would provide a solution to this problem by holding EU-based parent companies accountable for failing to identify, prevent, mitigate and remedy adverse human rights and environmental impacts created by their corporate group and wider business relationships. This follows international best practice in terms of similar duties existing in ‘soft’ law tools, such as the UNGPs⁶ and the 2018 *OECD Due Diligence Guidance for Responsible Business Conduct* (*OECD Due Diligence Guidance*).⁷ And due diligence duties are being enacted independently under the national laws of EU member states.⁸ For instance, French law, specifically Law No 2017-399 of 27 March 2017 on the corporate duty of vigilance for parent and instructing companies (the “Vigilance Law”),⁹ provides a useful example of legislation intended to prevent *tortious* activities from being conducted by MNEs. Examined in detail in Section 7 of this Report, it is heralded by some as ‘one of the most advanced domestic regimes with respect to mandated human rights due diligence.’¹⁰ Moreover, it is the only legislative example, to date, which imposes a general mandatory due diligence requirement for human rights and environmental

¹ OECD, *OECD Due Diligence Guidance for Responsible Business Conduct* (2018) 18 (hereafter ‘*OECD Due Diligence Guidance*’) <<http://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf>>.

² *ibid.*

³ See, for instance, United Nations, *Guiding Principles on Business and Human Rights* (2011) Principle 15, <https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf>.

⁴ Dalia Palombo, ‘The Duty of Care of the Parent Company: A Comparison between French Law, UK Precedents and the Swiss Proposals’ (2019) 4 *Business and Human Rights Journal* 265, 267.

⁵ *ibid.* 267.

⁶ UNGPs (n 3).

⁷ OECD, *OECD Due Diligence Guidance* (n 1).

⁸ See Palombo’s examination of developments under French, UK and Swiss Law (n 4) 269.

⁹ *Loi No 2017-399 du 27 mars 2017 relative au devoir de vigilance des sociétés mères et des entreprises donneuses d’ordre*.

¹⁰ Elsa Savourey, ‘France Country Report’ in Lise Smit, Claire Bright, Robert McCorquodale, Matthias Bauer, Hanna Deringer, Daniela Baeza-Breinbauer, Francisca Torres-Cortés, Frank Alleweldt, Senda Kara and Camille Salinier and Héctor Tejero Tobed, ‘Study on Due Diligence Requirements Through the Supply Chain, Part III: Country Reports’ (January 2020) 56-94, 88 <<https://op.europa.eu/en/publication-detail/-/publication/0268dfcf-4c85-11ea-b8b7-01aa75ed71a1/language-en/format-PDF/source-search>>.

impacts.¹¹ The framework shares commonalities with the human rights due diligence process provided by the UNGPs and associated standards,¹² and its interpretation is likely to be influenced by them. Its civil liability focus makes it a useful case-study to examine for the purpose of informing development of the proposed new due diligence duty at EU-level.

This Report will inform understanding of the material scope of such a duty in two primary ways:

- (a) Through defining ‘adverse environmental impacts’ (including harmful climate change impacts, deforestation impacts and forest and ecosystem degradation) for the purposes of the law’s due diligence (i.e. risk identification and management) obligations, and the types of remediation obligations that should apply to environmental impacts.
- (b) Through defining ‘environmental damage’ and ‘environmental crime’ for the purposes of establishing a liability regime.

2. The Material Scope of the Due Diligence Duty

This section will illustrate how the phrase ‘adverse environmental impact’ could be defined within the context of a mandatory cross sectoral due diligence duty under EU law. The interpretation given to that phrase will inform the preventive (impacts to be assessed) and remedial (impacts to be remedied) responsibilities of MNEs and so is of crucial importance to the scope of the due diligence duty. It will determine which factors are protected through the duty (and, in turn, which are *not*) and which may, in the event of their harm, damage, injury or loss, create liability for the enterprise. A wide interpretation will, of course, enhance the protection afforded to the ‘environment’ but enlarge the regulatory burden imposed upon MNEs. The reverse will also be true. A delicate balance must also be maintained between conferring legal certainty for MNEs and preserving flexibility for regulators.

Chapter V. Environment of the *OECD Guidelines* provides a concrete illustration of the importance of, and potential utility in, elucidating a clear, coherent definition. At paragraph 3 of the *OECD Guidelines*, it is asserted that enterprises should ‘[a]ssess, and address in decision-making, the *foreseeable* environmental, health, and safety-related *impacts* associated with the processes, goods and services of the enterprise *over their full life cycle*.’ Whilst an impact may be positive or negative/adverse, the implication is that the focus is upon negative/adverse impacts. The *OECD Guidelines* do not, however, define or elaborate on how ‘foreseeable environmental, health, and safety-related impacts’ ought to be defined. This leaves some fundamentally important questions unanswered. What *factors* are covered by the term ‘environmental’? What the *threshold* must be met before an ‘impact’ occurs? What *baseline* is to be used to determine the severity of an impact? And at what point is an impact deemed to be *foreseeable*?

2.1. Defining the ‘Environment’

Prior to examining interpretations of ‘adverse environmental impact’ it is essential to consider how the term ‘environment’ (and its variants) could be defined in the context of a mandatory due diligence duty. Examples can be gathered from pertinent legislation from across the globe. **The definition accorded to ‘environment’ is, of course, crucial to this report as it will inform the scope of the phrase ‘adverse environmental impact’ in the context of the imposition upon enterprises of a requirement to engage in due diligence in their global value chains. A narrow interpretation of ‘environment’ will lessen the scope for an adverse impact, a wider interpretation will achieve the opposite.**

¹¹ Lise Smit, Claire Bright, Robert McCorquodale, Matthias Bauer, Hanna Deringer, Daniela BaezaBreinbauer, Francisca Torres-Cortés, Frank Alleweldt, Senda Kara and Camille Salinier and Héctor Tejero Tobed, ‘Study on Due Diligence Requirements Through the Supply Chain, Final Report’ (January 2020) 169 <<https://op.europa.eu/en/publication-detail/-/publication/8ba0a8fd-4c83-11ea-b8b7-01aa75ed71a1/language-en>>.

¹² Savourey, ‘France Country Report’ (n 10) 56.

As a matter of policy, it is, therefore, crucial to arrive at a definition of the term 'environment' that can meet the requisite objectives of a mandatory cross-sectoral due diligence duty. We shall see that **whilst some frameworks utilise a closed (i.e. exhaustive) list approach, e.g. the 'environment' means X, Y and Z, others provided a more open-ended approach, asserting that the term includes X, Y and Z. The latter approach, therefore, creates flexibility and scope for the introduction of further factors that could be classified as part of the 'environment'. There is, of course, the option of leaving the term 'environmental' undefined. However, it may be prudent to generate clarity for all stakeholders concerned through a clear, focused legal definition of the term.**

When looking at definitions of the 'environment' in the laws of different jurisdictions we can see a wide variation in the techniques used to capture it. For example, s 3(1) of the *Environment Protection Act 2017* of Victoria, Australia, as amended by the *Environment Protection Amendment Act 2018 (Vic)*, defines 'environment' as,

- (a) the physical factors of the surroundings of human beings including the land, waters, atmosphere, climate, sound, odours and tastes; and
- (b) the biological factors of animals and plants; and
- (c) the social factor of aesthetics.

This closed list affords a broad interpretation of the term, including atmosphere and climate. It also includes factors such as sound, odours and tastes, which have the potential to generate nuisance actions in law. It does not, however, include human beings within the definition.

In the United States, under §101(8) of the Comprehensive Environmental Response, Compensation, and Liability (1980) ('CERCLA'), the term 'environment' means,

'(A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States..., and (B) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.'

Thus, CERCLA focuses principally upon water, land and air, making it significantly narrower in scope than the *Environment Protection Act 2017* (as amended) of Victoria.

Under s 2(1) of the *Resource Management Act 1991* of New Zealand, 'environment' includes,

- (a) ecosystems and their constituent parts, *including people and communities*; and
- (b) all natural and physical resources; and
- (c) amenity values; and
- (d) the social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) or which are affected by those matters.

The inclusion of peoples and communities and amenity values in this definition offers a novel and distinct edge to this definition. Reference to 'all' natural and physical resources is somewhat all-encompassing and creates a high degree of flexibility in interpretation.

And under s 3(1) of the *Canadian Environmental Protection Act, 1999*, the term 'environment' means 'the components of the Earth' and includes,

- (a) air, land and water;
- (b) all layers of the atmosphere;
- (c) all organic and inorganic matter and living organisms; and
- (d) the interacting natural systems that include components referred to in paragraphs (a) to (c).
(*environnement*)'

In a fashion similar to the *Environment Protection Act 2017* of Victoria (as amended), the 'open' definition under s 3(1) is wide and includes atmospheric factors. It does not explicitly include humans. The explicit

reference to ‘components of the Earth’ may be viewed as all encompassing, leaving little that would not appear to fall under the definition.

These definitions, therefore, illustrate a spectrum of factors or components which are deemed to comprise the ‘environment’. Some definitions are closed and/or narrow, others are open and broad. It is contended that the latter approach would be most appropriate for a mandatory cross sectoral due diligence duty under EU law.

2.2. Defining ‘Adverse Environmental Impact’

This section will examine the two broad techniques used in legal frameworks to define the term ‘adverse environmental impact’. It will also consider closely analogous terms utilised in pertinent International Conventions (e.g. ‘pollution damage’). The first technique is by way of *direct* definition, with Council Regulation (EC) No 734/2008 of 15 July 2008 on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears and the *Environmental Protection Act R.S.O. 1990* of Ontario, Canada, providing two relatively rare instances of the analogous phrases ‘significant adverse impacts’ and ‘adverse effect’ being defined explicitly in legislation. The phrase ‘significant adverse impacts’ is found in other legal frameworks but often remains undefined.¹³ The second is by way of *indirect* definition. In effect, the term is defined in reverse. For example, under the ELD, there is deemed to be damage to water (i.e. ‘environmental damage’) where the damage *significantly adversely affects* the ecological, chemical or quantitative status or the ecological potential of the waters concerned, or the environmental status of the marine waters concerned.¹⁴ Different parts of the ELD help us to understand how the phrase ‘significantly adversely affects’ ought to be interpreted, with guidance on establishing ‘significance’ provided in Annex I.

The provision of an indirection definition within legislation is significantly more common than provision of a direct definition. For instance, there is no explicit definition of ‘significant environmental impact’ under the EU Environmental Impact Assessment Directive, despite that phrase being an essential threshold for an environmental assessment under the Directive. And there is no definition of ‘adverse impact’ in the context of environmental matters under the EU Non-Financial Reporting Directive or the Directive amending it. The latter does, however, assert in recital 7 that,¹⁵

Where undertakings are required to prepare a non-financial statement, that statement should contain, as regards environmental matters, *details of the current and foreseeable impacts of the undertaking's operations on the environment, and, as appropriate, on health and safety, the use of renewable and/or non-renewable energy, greenhouse gas emissions, water use and air pollution.*

¹³ See, e.g., the United Nations Convention on Biological Diversity, Rio de Janeiro, 5 June 1992. Under art 7(c), Contracting Parties are required to, ‘[i]dentify processes and categories of activities which have or are likely to have *significant adverse impacts* on the conservation and sustainable use of biological diversity, and monitor their effects through sampling and other techniques.’ However, that phrase is not defined in the Convention. However, a hint is provided in the preamble: ‘it is vital to anticipate, prevent and attack the causes of *significant reduction or loss of biological diversity* at source’. It may, therefore, be inferred that a ‘significant adverse impact’ may be defined, within the particular context of this Convention, as a significant reduction or loss of biological diversity. In art 2, ‘biological diversity’ is defined ‘the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.’

¹⁴ A similar approach is taken in the Accountability Framework where the term ‘degradation’ is defined as ‘[c]hanges within a natural ecosystem that *significantly and negatively affect* its species composition, structure, and/or function and reduce the ecosystem’s capacity to supply products, support biodiversity, and/or deliver ecosystem services.’: Accountability Framework, *Terms and Definitions* (June 2019) 8 <<https://accountability-framework.org/contents-of-the-framework/>>.

¹⁵ OJ L 330/1, Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards Disclosure of Non-Financial and Diversity Information by Certain Large Undertakings and Groups.

Whilst the phrase ‘current and foreseeable impacts of the undertaking's operations on the environment’ is not defined, the recital suggests that this phrase is conceptually distinct from impacts of the undertaking’s energy use, its greenhouse gas emissions, its water use and air pollution that it causes. Instinctively, it would have been thought that these were precisely the types of foreseeable impacts on the environment that the recital had in mind.

2.2.1. Direct Definitions

EU: Council Regulation on Vulnerable Marine Ecosystems

Art 2 of Council Regulation (EC) No 734/2008 of 15 July 2008 on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears, defines ‘significant adverse impacts’ as,

impacts (evaluated individually, in combination or cumulatively) which *compromise ecosystem integrity* in a manner that *impairs* the ability of affected populations to replace themselves and that *degrades* the long-term natural productivity of habitats, *or causes on more than a temporary basis significant loss* of species richness, habitat or community types.

There are, therefore, four components required to satisfy this definition:

- (1) The presence of an impact or impacts, *AND*
- (2) The impact(s) have compromised ecosystem integrity, *AND*
- (3) That compromise has impaired the ability of affected populations to replace themselves, *AND*
- (4)(a) degraded the long-term natural productivity of habitats, OR
- (4)(b) caused significant loss of species richness, habitat or community types in a non-temporary basis.

It should be observed that whilst the phrase ‘ecosystem integrity’ is defined, neither ‘significant’ or ‘impact’ are. The term ‘adverse’ is defined, through implication, to mean negative. Whilst the term ‘environmental’ is absent from the phrase ‘significant adverse impact’, it is clear from the drafting of the provision that such an impact must be upon the environment, specifically ecosystems.

Ontario, Canada: Environmental Protection Act R.S.O. 1990, CHAPTER E.19

The *Environmental Protection Act R.S.O. 1990* of Ontario, Canada, provides one of the rare definitions of the phrase ‘adverse effect’. The location of this phrase in the *Environmental Protection Act* implies that the definition is concerned specifically with adverse *environmental* impacts.

Under s 1(1), ‘adverse effect’ means one or more of,

- (a) impairment of the quality of the natural environment *for any use that can be made of it*,
- (b) injury or damage to property or to plant or animal life,
- (c) harm or material discomfort to any person,
- (d) an adverse effect on the health of any person,
- (e) impairment of the safety of any person,
- (f) rendering any property or plant or animal life unfit for human use,
- (g) loss of enjoyment of normal use of property, and
- (h) interference with the normal conduct of business; (“*conséquence préjudiciable*”).

Under s 1(1), the ‘natural environment’ means ‘the air, land and water, or any combination or part thereof, of the Province of Ontario; (“*environnement naturel*”)’. The reference to ‘for any use that can be made of it’ does not make clear whether the use is to be by humans and/or by nature itself. Only factors (a) and (b) can be deemed to encompass the natural environment *as such*. Whilst the provision provides a closed list of circumstances which are deemed to amount to an ‘adverse effect’, it is clear that Ontario’s definition of the phrase is broad and includes the natural environment, private property, human health and safety, use value and business interference. In *Castonguay Blasting Ltd. v. Ontario (Environment)*, the Supreme Court of

Canada held that '[t]o interpret "adverse effect" restrictively...narrows the scope of the reporting requirement, thereby restricting its remedial capacity'.¹⁶ Such an interpretation would also 'limit the scope of the EPA's protective and preventative capacities and, consequently, the Ministry's ability to respond to the broad purposes of the statute.'¹⁷ Thus, not only are the circumstances under which there may be deemed to be an 'adverse environmental impact' wide, the listed circumstances must also be interpreted in a non-restrictive manner.

2.2.2. Indirect Definitions

As we have seen, direct definitions of 'adverse environmental impact' in regulatory frameworks are rare, with indirect definitions being far more common. This section will outline pertinent examples.

2.2.2.1. OECD Due Diligence Guidance for Responsible Business Conduct

The 2018 *OECD Due Diligence Guidance for Responsible Business Conduct*¹⁸ lists the following as *examples* of adverse impacts on matters covered by the *OECD Guidelines*:

- Ecosystem degradation through land degradation, water resource depletion, and/or destruction of pristine forests and biodiversity.
- Unsafe levels of biological, chemical or physical hazards in products or services.
- Water pollution (e.g. through discharging waste water without regard to adequate wastewater infrastructure).

This list is deemed to be illustrative and is not exhaustive.

The *OECD Due Diligence Guidance* asserts that, '[t]he significance of an adverse impact is understood as a function of its likelihood and severity. Severity of impacts will be judged by their scale, scope and irremediable character.

Scale refers to the gravity of the adverse impact.

Scope concerns the reach of the impact, for example the number of individuals that are or will be affected or the extent of environmental damage.

Irremediable character means any limits on the ability to restore the individuals or environment affected to a situation equivalent to their situation before the adverse impact.'¹⁹

Part of this wording mirrors that comprised within the 'Commentary' to Principle 14 of the UNGPs: '[s]everity of impacts will be judged by their scale, scope and irremediable character.'²⁰ There is, seemingly, intended to be a common position on this point between the *OECD Due Diligence Guidance* and the UNGPs. There is also a connection here with any potential judicial interpretation given to the term "severe" under the Vigilance Law of France. As will be discussed in section 7, article L. 225-102-4.-I para. 3 of the French Commercial Code states that the vigilance plan 'shall contain reasonable vigilance measures adequate to identify risks and to prevent severe impacts on [...]'. Thus, the concept of 'severity' is key to the applicability of the Vigilance Law. Nevertheless, the Vigilance Law 'does not specify how and at what scale the notion of severity should be assessed'.²¹ Savourey has suggested that the UNGPs – and, therefore, the *OECD Due Diligence Guidance* – may be expected to guide their interpretation,²² given that those 'soft' law tools inspired legal developments in France.²³

¹⁶ *Castonguay Blasting Ltd. v. Ontario (Environment)*, 2013 SCC 52, [2013] 3 S.C.R. 323 [31]

¹⁷ *ibid* [35]

¹⁸ OECD, *OECD Due Diligence Guidance* (n 1) 39.

¹⁹ *ibid* 42.

²⁰ UNGPs (n 3) Principle 14.

²¹ Savourey, 'France Country Report' (n 10) 88.

²² *ibid*.

²³ Stéphane Brabant and Elsa Savourey, 'France's Corporate Duty of Vigilance Law: A Closer Look at the Penalties Faced by Companies' (December 2017) 3 [This article is a translation of an article originally written by the authors in June 2017 in French, entitled « Loi relative au devoir de vigilance, des sanctions pour prévenir et réparer ? »,

Within the context of the environment, adverse impacts are clearly deemed analogous to environmental damage. Whilst the *OECD Due Diligence Guidance* does not state that an adverse impact must *always* be equated with environmental damage, the presence of such damage, particularly where it is extensive, is likely to result in categorisation as a significant adverse impact. The following table provides examples of indicators of scale, scope and irremediable character:

EXAMPLES OF SCALE	EXAMPLES OF SCOPE	EXAMPLES OF THE IRREMIABLE CHARACTER
<ul style="list-style-type: none"> • Extent of impact on human health • Extent of changes in species composition • Water use intensity (% use of total available resources) • Degree of waste and chemical generation (tons; % of generation) 	<ul style="list-style-type: none"> • Geographic reach of the impact • Number of species impacted 	<ul style="list-style-type: none"> • Degree to which rehabilitation of the natural site is possible or practicable • The length of time remediation would take

Source: OECD, *OECD Due Diligence Guidance for Responsible Business Conduct* (2018) 43

2.2.2.2. EU Environmental Impact Assessment (EIA) Directive

The EIA Directive is a logical place to start in the elucidation of a legal definition of the phrase ‘adverse environmental impact’. The Directive utilises an analogous term, ‘significant environmental impact’. It does not, however, define that phrase, relying instead upon an indirect definition. This leaves a wide degree of discretion to Member States to define it as they see fit. There is, thus, the consequential potential for divergence in national practice as a result.

The EIA Directive applies to the assessment of the environmental effects of public and private projects likely to have significant effects on the environment.²⁴ Under art 2(1), Member States are to ensure that, before development consent is given, such projects, by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects on the environment. Recital 14 makes clear that the effects of a project on the environment should be assessed ‘in order to take account of concerns to protect human health, to contribute by means of a better environment to the quality of life, to ensure maintenance of the diversity of species and to maintain the reproductive capacity of the ecosystem as a basic resource for life.’²⁵

Under art 3(1) and Annex VI, the environmental impact assessment shall identify, describe and assess the *direct* and *indirect* significant effects of a project on the following factors:

- (a) population and human health,
- (b) biodiversity (e.g. fauna and flora),

published in the International Review of Compliance and Business Ethics [Revue Internationale de la Compliance et de l'Éthique des Affaires].

²⁴ OJ L 26/1 Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) (article 1)

²⁵ *ibid* recital 14.

- (c) land (e.g. land take), soil (e.g. organic matter, erosion, compaction, sealing), water (e.g. hydromorphological changes, quantity and quality) air and climate (greenhouse gas emissions, impacts relevant to adaptation),
- (d) material assets, cultural heritage (including architectural and archaeological aspects) and the landscape,
- (e) the interaction between the factors referred to in points (a) to (d).

These factors help frame the conception of the ‘environment’ under the Directive and, indeed, in respect of the scope of the due diligence duty. That term is not defined explicitly in the Directive. The listed factors give concrete substance to the term ‘environmental’ in the phrase ‘significant *environmental* impact’. Put another way, there will be a ‘significant environmental impact’ when one or more of those factors is impacted *significantly*. The term is clearly to be interpreted widely to include the physical features of the natural environment, but also cultural heritage, landscape and human health.

The assessment shall include the *expected* effects deriving from the vulnerability of the project to risks of major accidents and/or disasters relevant to the project.²⁶ The description of the likely significant effects on the factors listed above at (a)-(e) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project.²⁷

Projects listed in Annex I are *automatically* subject to an environmental impact assessment as they are deemed to have significant effects on the environment.²⁸ They include, for example, crude-oil refineries, nuclear power stations and quarries and open-cast mining projects over a given size. **This closed ‘list’ of activities deemed to exhibit a significant environmental impact informs our understanding of the significance of the environmental impact in the sense that a specified series of activities are predetermined to produce such an impact.** For projects listed in Annex II, Member States *decide* whether the project is to be made subject to an assessment through a case-by-case examination or thresholds or criteria set by the Member State.²⁹ They may not have significant effects on the environment, at least not in every case. The criteria to determine whether the projects listed in Annex II should be subject to an environmental impact assessment are set out in Annex III. They include, the *characteristics* of the project (e.g. the size and design of the whole project, the use of natural resources, pollution and nuisances and the risks to human health), the *location* of the project, and the *type* and *characteristics* of the *potential impact* (e.g. the magnitude and spatial extent of the impact, the nature of the impact and the intensity and complexity of the impact). Again, these criteria help us to understand the ‘significance’ of the environmental impact in a more ‘case by case’ manner.

To summarise, the EIA Directive informs our understanding of the phrase ‘adverse environmental impact’ as follows. First, ‘adverse’ is understood as meaning negative. Second, the significance of that impact is derived from (i) a list of specified activities that produce such an effect; (ii) a series of factors which help us to determine the scale of that effect. Third, the term ‘environmental’ is understood through provision of a rich list of factors in art 3(2) against which the effects of the project must be assessed. Finally, ‘impact’ is to be construed as ‘effect’.

2.2.2.3. The EU Environmental Liability Directive

The ELD provides a particularly apt case-study as it provides a definition of ‘environmental damage’ that is intricately connected to, and dependent upon, the idea of significant adverse *effect*. It is, therefore, a legal framework which, at least on the face of it, exhibits a *degree* of potential to inform development of a mandatory cross sectoral due diligence duty and the manner in which ‘adverse environmental impact’ could be interpreted under it. That said, the ELD is far from perfect and has some important limitations.³⁰

²⁶ EIA Directive, art 3(2).

²⁷ *ibid*, Annex VI, para 5.

²⁸ *ibid*, art 4(1).

²⁹ *ibid*, art 4(1).

³⁰ For instance, the ELD failed to implement a mandatory financial security/provision regime. This means that an operator can carry out activities that may be environmentally harmful without the guarantee that they possess

First, as we shall see, it effectively limits interpretation of the term ‘environment’ to protected habitats and species, land and water and, to some extent, humans (where there is a significant risk to their health as a result of damage to land). It is, therefore, perceived to exhibit a ‘narrow identification’ of the idea of ‘damage’.³¹ Second, it does not apply to damage that does not reach or exceed the requisite thresholds, i.e. significant damage. In such circumstances, there is no ‘environmental damage’ in strict legal terms. This will be left to be governed by applicable national law if this does, in fact, exist. Third, it has been asserted that the thresholds for liability under it are too high. For instance, the Commission has found that the threshold for damage to a protected species or natural habitat is high and will not be exceeded in many instances of damage.³² The Commission is, however, spending a significant amount of time and resources clarifying some of the difficult terminology relating to these issues, with a view to rendering the ELD of greater operational use by competent authorities.³³ Indeed, art.18 of the ELD was revised to direct the Commission to develop guidelines providing a common understanding of the term ‘environmental damage’ as defined in art 2 by 31 December 2020.

That the opening Article asserts that the ELD is ‘based’ on the polluter-pays principle sets the tone for the Directive as a whole.³⁴ According to the conception of that principle under the ELD, an operator *causing* environmental damage or creating an imminent threat of such damage should, in principle, bear the cost of the necessary preventive or remedial measures.³⁵ Operators should also bear the cost of associated administrative expenses, such as assessing environmental damage.³⁶ The threat of liability under the ELD is intended to stimulate changes in behaviour. It seeks to ‘induce operators to adopt measures and develop practices to minimise the risks of environmental damage so that their exposure to financial liabilities is reduced.’³⁷ As we shall see, operators are also required to take preventive action where there is an imminent threat of environmental damage, providing the framework with an important *ex ante* environmental protection function.³⁸

The Meaning of ‘Environmental Damage’

The ELD establishes an EU-wide framework of liability to prevent and remedy *specific types* of environmental damage.³⁹ Art 2(1) asserts that the term ‘environmental damage’ refers to damage to:

- (a) *protected species and natural habitats*,⁴⁰
- (b) water, and
- (c) land

sufficient funds to remedy pollution that they may cause. As Fogleman observes, ‘whilst a decision not to introduce mandatory financial security is not contrary to the polluter-pay principle, it does not implement it’: Valerie Fogleman, ‘Polluter pays principle for accidental environmental damage; implementation in the Environmental Liability Directive’ in Alessandro D’Adda, Ida Angela Nicotra and Ugo Salanitro (eds), *Principi Europei e Illecito Ambientale* (Giappichelli Editore 2013) 149.

³¹ Maria Lee, ‘New Environmental Liabilities: The Purpose and Scope of the Contaminated Land Regime and the Environmental Liability Directive’ (2009) 11 *Envtl L Rev* 264, 267.

³² COM(2016) 204 final, ‘Report from the Commission to the Council and the European Parliament under Article 18(2) of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage’, 5

³³ Whilst the ELD has been underutilised in certain Member States, it has been utilised extensively in others. A 2016 Report by the Commission found that between April 2007 and April 2013, Member States reported approximately 1,245 incidents of environmental damage which triggered application of the ELD: European Commission, ‘Report from the Commission to the Council and the European Parliament under Article 18(2) of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage COM’ (2016) 204 final, 1. Two Member States account for more than 86% of all reported damage cases (Hungary: 563 cases, Poland: 506) and six Member States reported most of the remaining cases (Germany (60), Greece (40), Italy (17), Latvia, Spain and the United Kingdom). Eleven Member States reported no ELD damage incidents since 2007: *ibid.*

³⁴ ELD, art 1.

³⁵ ELD, recital eighteen (emphasis added).

³⁶ ELD, recital eighteen.

³⁷ ELD, recital two.

³⁸ ELD, art 5(1).

³⁹ ELD, art 1.

⁴⁰ As defined under art 2(4) ELD.

The term 'damage' pervades all three categories and is defined as a *measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly*.⁴¹ *Measurability* is, therefore, a central determinant as to whether 'environmental damage' (as defined in the directive) has been caused. Indeed, this must be viewed as essential to the efficacy of any framework of environmental liability, including one implemented under a due diligence law. Scientific assessment will be required to determine if the relevant threshold has been met.⁴² If the threshold is not met then the incident will be governed by the relevant national law of the Member State (if it exists), not the ELD.⁴³ Of the reported cases of environmental damage in the EU, 50% concerned damage to land, 30% to water and around 20% to biodiversity.⁴⁴

Damage to air is conspicuously absent from the definition of 'environmental damage' under art 2(1), something which the European Parliament has asked the Commission to reconsider in light of the harm caused by air pollution to human health and the environment.⁴⁵ Italy did, however, decide to implement 'damage to the atmosphere' in its national legislation even where it has no measurable and significant impact on land, water and protected species and natural habitats.⁴⁶ This provides a clear example of a Member State exercising its power under the Directive to enact requirements stricter than those set out in it.⁴⁷ Nevertheless, it remains the case that ELD does not currently cover impairment of air *quality*.⁴⁸ In *Túrkevei Tejtermelő Kft. v Országos Környezetvédelmi és Természetvédelmi Főfelügyelőség*, the ECJ confirmed that 'air pollution does not in itself constitute environmental damage covered by Directive 2004/35'.⁴⁹ However, recital four is particularly pertinent here. It asserts that environmental damage, 'also includes damage caused by *airborne elements* as far as they cause *damage* to water, land or protected species or natural habitats.'⁵⁰ Thus, the ELD is categorically relevant where water, land, protected species or natural habitats are *damaged by* emissions to air from, for instance, an industrial chimney. The competent authority must, however, adduce evidence that air pollution had *caused* such damage if the need for the relevant operator to take remedial measures is to arise. Where this can be done, the pollution would come within the scope of the ELD.⁵¹ If not, the ELD would not be applicable and relevant national law would apply.

⁴¹ ELD, art 2(2).

⁴² Valerie Fogleman, 'Enforcing the Environmental Liability Directive: Duties, Powers and Self-Executing Provisions' [2006] 4 Env Liability 127, 136.

⁴³ Valerie Fogleman, 'The Duty to Prevent Environmental Damage in the Environmental Liability Directive; A Catalyst For Halting The Deterioration Of Water And Wildlife' (2020) 20 ERA Forum 707, 711.

⁴⁴ COM(2016) 204 final, 'Report from the Commission to the Council and the European Parliament under Article 18(2) of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage', 3

⁴⁵ European Parliament resolution of 26 October 2017 on the application of 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 (the 'ELD') (2016/2251(INI)), para 34. In light of the fact that 'air pollution harms human health and the environment' with nitrogen dioxide and particulate matter pollution posing particularly serious health risks, the European Parliament has also called for 'ecosystems' to be included in the definition of 'environmental damage' and 'natural resource' in art 2: *ibid* para 28.

⁴⁶ Report from the Italian Government to the European Commission Pursuant to Article 18(1) of Directive 2004/35/EC on Environmental Liability with regard to the Prevention and Remedying of Environmental Damage (July 2013) 8
<https://ec.europa.eu/environment/legal/liability/pdf/eld_ms_reports/IT.pdf>.

⁴⁷ ELD, art 3(2).

⁴⁸ *Túrkevei Tejtermelő Kft. v Országos Környezetvédelmi és Természetvédelmi Főfelügyelőség* [2017] EUECJ C-129/16, Opinion of AG Kokott, [26]

⁴⁹ *ibid* [41].

⁵⁰ ELD, recital four (emphasis added).

⁵¹ *Túrkevei Tejtermelő* (n 38), Opinion of AG Kokott, [46].

Damage to water

This refers to damage that *significantly adversely affects* the ecological, chemical or quantitative status or the ecological potential of the waters concerned,⁵² or the environmental status of the marine waters concerned.⁵³

Damage to land

This refers to land contamination that creates a *significant risk of human health being adversely affected* due to the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms. Unlike damage to water and protected species and natural habitats, there is no reference to EU legislation in the definition of damage to land. No such legislation exists. The proposed Soil Framework Directive was withdrawn in 2014.⁵⁴ Humans are the pertinent receptor, not the land/soil itself. Thus, an operator is not required to pay for damage to land that does not create a *significant risk of human health*. It is likely that there must be human activity in the vicinity of the damage for damage to land to be actionable by a competent authority. If there is no such human activity, then there is likely to be no 'damage to land'. Consequently, it may not be possible to impose liability for remediating areas of wetlands and forests where there is an absence of human activity.⁵⁵ Winter et al find it 'perplexing' that damage to land that is not related to contamination, such as land erosion, is not covered by the ELD.⁵⁶ Protected species, habitats and waters are protected under the ELD even when damage to them does not create a risk to human health.⁵⁷ Winter et al contend that soil is no lesser environmental component than species and might even be viewed as a more important environmental resource.⁵⁸

Damage to protected species and natural habitats

This refers to damage that has *significant adverse effects* on reaching or maintaining the *favourable conservation status* of protect species or habitats. In respect of a *natural habitat*, 'conservation status' means the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species.⁵⁹ It will be treated as 'favourable' when:

- its natural range and areas that it covers within that range are stable or increasing,
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable (see below).

In respect of *species*, 'conservation status' means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations.⁶⁰ It will be treated as 'favourable' when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats,
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and

⁵² As defined in Directive 2000/60/EC. With the exception of adverse effects where Article 4(7) of that Directive applies.

⁵³ As defined in Directive 2008/56/EC. In so far as particular aspects of the environmental status of the marine environment are not already addressed through Directive 2000/60/EC

⁵⁴ Valerie Fogleman, 'Landowners' liability for remediating contaminated land in the EU: EU or law? Part I: EU law' [2015] 1 Env Liability 1, 9.

⁵⁵ *ibid.*

⁵⁶ Gerd Winter, Jan H Jans, Richard Macrory and Ludwig Krämer, 'Weighing up the EC Environmental Liability Directive' (2008) 20 JEL 2 163, 173.

⁵⁷ *ibid.*

⁵⁸ *ibid* 173-4.

⁵⁹ ELD, art 2(4)(a).

⁶⁰ ELD, art 2(4)(b).

- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

To be clear, the ELD does not merely impose liability on an operator to prevent and remediate damage caused by *pollution*.⁶¹ It will also cover, for example, damage to a protected species or natural habitat from the abstraction of water and damage to a river's ecological status caused by fluctuations in the water level from the operation of a hydroelectric power plant.⁶²

The concept of 'significance' lies at the heart of the definition of environmental damage. It can have several different interpretations, such as:⁶³

- **Regulatory** (e.g. incident is explicitly prohibited, such as pollution in excess of regulatory criteria, standards, or a permit);
- **Social** (e.g. damage to something important to a society);
- **Biological** (i.e. effect has biological, physiological, or ecological consequences that are deemed to be 'adverse');
- **Statistical** (i.e. observed or measured conditions deemed unlikely to have occurred solely due to random chance); and
- **Scale** (e.g. damage that is particularly 'large').

Whilst the ELD leaves final determination of significance in each case to the relevant competent authority,⁶⁴ guidance is provided in Annex 1 on the meaning of *significant*. Uncertainty over this meaning has proven to be one of the main barriers to an effective and uniform application of the ELD.⁶⁵ This is due to different interpretations and application of the threshold across the EU. It asserts that the *significance* of any damage has to be assessed by reference to: (1) the conservation status at the time of the damage; (2) the services provided by the amenities they produce; and (3) the habitats' or species' capacity for natural regeneration. It should be determined through *measurable* data such as:

- the number of individuals, their density or the area covered,
- the role of the particular individuals or of the damaged area in relation to the species or to the habitat conservation, the rarity of the species or habitat,
- the species' capacity for propagation, its viability or the habitat's capacity for natural regeneration,
- the species' or habitat's capacity to recover within a short time, without any intervention other than increased protection measures, to a condition deemed equivalent or superior to the baseline condition.

It is important to observe that, according to Annex 1, damage with a *proven effect on human health* must be classified as significant damage. This could inform our understanding of an 'adverse environmental impact' through recognition that such an impact would be deemed to exist where there was evidence that it had a proven effect on human health.

Accurate information concerning the condition of the affected natural resource prior to the harmful event is necessary if an adverse change is to be measured.⁶⁶ This raises the question as to whether in all cases such information is available.⁶⁷ Article 2(14) asserts that the baseline condition is to be estimated on the basis of the best information available. However, van den Broek asserts that '[t]he reconstruction of the

⁶¹ Fogleman, 'The Duty to Prevent Environmental Damage' (n 43) 708.

⁶² *ibid.*

⁶³ eftec and Stratus Consulting, *Environmental Liability Directive: Training Handbook and Accompanying Slides*, Contract Reference No. 070307/2012/621542/SER/A1 (February 2013) 22

⁶⁴ *ibid.* 24.

⁶⁵ European Parliament resolution of 26 October 2017 on the application of 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 (the 'ELD') (2016/2251(INI)), [9].

⁶⁶ G M van den Broek, 'Environmental Liability and Nature Protection Areas - Will the EU Environmental Liability Directive Actually Lead to the Restoration of Damaged Natural Resources' (2009) 5 *Utrecht L Rev* 117, 123.

⁶⁷ *ibid.*

baseline condition could become disputable in cases where accurate measurable data are not available and the baseline condition is estimated on the basis of general, dated, incomplete or unreliable data.⁶⁸ In assessing damage, it is crucial that 'detailed, specific and accurate information is available on the parameters used to assess the conservation status.'⁶⁹ In its absence, it will be difficult to prove that an adverse change has taken place.⁷⁰ It will be particularly challenging in respect of providing evidence that an incident has significant adverse effects on reaching or maintaining the favourable conservation status.⁷¹ It will have to be proven that the damage exceeds natural fluctuations or negative variations due to natural causes and that the species or habitats will not recover within a short time and without intervention.⁷²

It is important to note that the thresholds for damage do not apply to measures to prevent environmental damage; damage does not need to reach or exceed the threshold before the ELD applies.⁷³ An *imminent threat* of such damage, defined as 'a sufficient likelihood that environmental damage will occur in the near future' (art 2(9)), is sufficient to trigger the duty arising under the ELD. The preventive measures that the operator must carry out are defined as 'any measures taken in response to an event, act or omission that has created an imminent threat of environmental damage, with a view to preventing or minimising that damage' (art 2(10)). Fogleman argues that 'the ELD requires an operator to decline to carry out authorised activities that the operator knows will cause an imminent threat of, or actual, environmental damage or to modify those activities so that they do not cause environmental damage.'⁷⁴ The permit defence (i.e. the operator is not liable for remediating environmental damage caused by the authorised activities provided it is not negligent) does not apply to preventive measures.⁷⁵

The Causal Link

We have seen that the ELD seeks to establish a framework of environmental liability to prevent and remedy environmental damage.⁷⁶ However, the ELD concedes that not all forms of environmental damage can be remedied through liability mechanisms.⁷⁷ It asserts that liability mechanisms are appropriate where,⁷⁸

- (1) there are one or more *identifiable* polluters;
- (2) the damage is *concrete* and *quantifiable*; and
- (3) there is a *causal link* between the damage and the identified polluter(s).

In contrast, liability will not be a suitable instrument for dealing with pollution of a '*widespread*, diffuse character, where it is *impossible* to link the negative environmental effects with acts or failure to act of certain individual actors.'⁷⁹ As we shall see, this does not mean that the ELD does not apply to diffuse pollution. In fact, it is entirely capable of doing so and its reach has been aided by a facilitative approach adopted by the CJEU. The ELD leaves it to Member States to establish national rules covering cost allocation in cases of multi-party causation.⁸⁰ Most opted for a system of joint and several liability.⁸¹

The causal link functions as the *essential nexus* between stages (1) and (2) above in both the strict and fault-based regimes implemented by the ELD. Establishment of the link, in accordance with national rules on

⁶⁸ *ibid.*

⁶⁹ *ibid.*

⁷⁰ *ibid.*

⁷¹ *ibid.*

⁷² *ibid.*

⁷³ Fogleman, 'The Duty to Prevent Environmental Damage' (n 43) 711.

⁷⁴ *ibid* 708.

⁷⁵ *ibid.*

⁷⁶ ELD, art 1.

⁷⁷ ELD, recital thirteen.

⁷⁸ ELD, recital thirteen.

⁷⁹ ELD, recital thirteen (emphasis added).

⁸⁰ ELD, recital twenty-two.

⁸¹ European Commission, 'Report to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, under Article 14(2) of Directive 2004/35/EC on the environmental liability with regard to the prevention and remedying of environmental damage' COM (2010) 581 final, [2.2]

evidence, renders the relevant operator(s) *responsible* for the environmental damage.⁸² The evidential burden is placed upon the competent authority to prove the link.⁸³ The ECJ has held that a causal link will be established 'easily' where the pollution was: (a) confined to a specific *area*; (b) confined to a specific *period of time*; and (c) is attributable to a *limited number* of operators.⁸⁴ This may not always be the case with diffuse pollution. Where the link cannot be proven, the situation falls outside the scope of the ELD and will be governed by the national law of the Member State.⁸⁵ This may be no better equipped to provide a solution. Civil claims in tort also require causation to be proven. The threshold for establishing causation in tort is likely to be higher than that required under the ELD (see below). However, even where civil actions provide an avenue for redress, there is no guarantee that damages obtained by the claimant will be allocated to deal with the environmental damage created. In these circumstances, the costs associated with the pollution will be transferred to society contrary to the policy driving the polluter-pays principle under EU law.

There is CJEU caselaw which helps us understand how a causal link may be established between criteria (1) and (2). This is not only relevant for the purposes of liability arising under the ELD but can help inform understanding of responsibilities arising under other 'hard' and 'soft' law frameworks. For instance, under the UNGPs,⁸⁶ a framework of the latter type, Principle 22 provides that: '[w]here business enterprises identify that they have *caused or contributed to* adverse impacts, they should provide for or cooperate in their remediation through legitimate processes.' As we shall see, the UNGPs inspired creation of the Vigilance Law of France,⁸⁷ (a 'hard' law framework) and are likely to inform interpretation of the civil liability system, based on the law of tort, that it implements. The need to establish a causal link would be relevant where, for instance, it was alleged that 'environmental damage' had been caused by emissions from an industrial facility or a collection of such facilities within a locality. The decision of the Grand Chamber of (what was then) the European Court of Justice (ECJ), including the opinion of the Advocate General,⁸⁸ in *Raffinerie Mediterranee (ERG) SpA v Ministero dello Sviluppo Economico*⁸⁹ is particularly helpful in this regard. Questions referred to the ECJ for a preliminary⁹⁰ ruling related to, inter alia, whether it was compatible with the polluter-pays principle to impute liability for remedying environmental damage to certain persons by reason of their commercial activities or their status as owners of land, irrespective of any causal contribution or fault. A site in Sicily which had seen successive hydrocarbon and petrochemical industry operations had been affected by recurring incidents of pollution. This made specific assessment of the individual liability of the various undertakings for the pollution difficult. The Italian authorities dealt with this by requiring the undertakings operating in the area to remedy the existing environmental pollution. But the authorities did not differentiate between previous and current pollution nor did they assess the extent to which each individual undertaking was responsible for the pollution which had occurred.

The decision of AG Kokott may be considered first. The Opinion delivered by an Advocate General is not binding upon the court. It is, however, persuasive. Whilst AG Kokott asserted that the *causation* of damage was the primary requirement for liability for environmental damage under the ELD,⁹¹ she held that it was also reasonable to identify *additional* responsible parties on the basis of the polluter-pays principle.⁹² Member States and the European Commission enjoyed a broad margin of discretion in laying down

⁸² C-379/08 *Raffinerie Mediterranee (ERG) SpA v Ministero dello Sviluppo Economico* [2010] 3 CMLR 9, [64] and [65].

⁸³ Case C-534/13 *Ministero dell'Ambiente e della Tutela del Territorio e del Mare v Fipa Group Srl* ECLI:EU:C:2014:2393, [54].

⁸⁴ *ibid* [54].

⁸⁵ *ibid* [59].

⁸⁶ UNGPs (n 3).

⁸⁷ *Brabant and Savourey* (n 23) 3.

⁸⁸ The function of the AG's Opinion is to ascertain and present the factual and legal elements of a case in a clear and precise manner before submitting a solution: Philippe Léger, 'Law in the European Union: The role of the advocate general' (2004) 10(1) *The Journal of Legislative Studies* 1.

⁸⁹ C-379/08 *Raffinerie Mediterranee (ERG) SpA v Ministero dello Sviluppo Economico* [2010] 3 CMLR 9.

⁹⁰ A preliminary ruling rule is a mechanism which allows a national court to ask the CJEU for clarification where it is in doubt about the interpretation or validity of an EU law. It can be used to determine whether a national law or practice is compatible with EU law.

⁹¹ *ibid*, Opinion of AG Kokott, [82].

⁹² *ibid* [106].

supplementary liability mechanisms in this regard.⁹³ For AG Kokott, financial liability was consistent with the principle, 'where a *causal contribution* can be identified, *but not its extent*.'⁹⁴ The reason for this position was that it was often difficult (and sometimes impossible) to put precise figures on the causal contribution of individual operators to specific environmental damage.⁹⁵ If these operators were absolved entirely from their responsibility in such circumstances then the polluter-pays principle would be weakened.⁹⁶ It would amount to accepting environmental damage and this would be incompatible with the aim of (a) encouraging a high level of environmental protection and (b) improving the quality of the environment.⁹⁷ Indeed, the very 'function' of the principle was to help to achieve those objectives.⁹⁸ The central point to take from the Opinion is that when a precise figure could not be placed on the causal contribution of individual operators, the costs could be imposed *jointly* on the polluters *who could be identified*.⁹⁹

The ECJ offered guidance on how polluters could be identified. Whilst the ELD applies to environmental damage 'caused' by occupational activities,¹⁰⁰ the ECJ emphasised that the ELD did not specify how precisely a causal link was to be established; the manner in which that criterion was to be interpreted fell within the competence of the Member States.¹⁰¹ Put another way, whilst the operator must have 'caused' the damage if it is to be held liable under the ELD, the ELD did not specify how that term was to be interpreted. The ECJ made clear that according to the polluter-pays principle, the obligation to take remedial measures was imposed upon operators only because of their *contribution* to the creation of pollution.¹⁰² It asserted that the ELD did not preclude national legislation which allowed the competent authority acting *within* the framework of the Directive, 'to operate on the *presumption...that there is a causal link between operators and the pollution found on account of the fact that the operators' installations are located close to the polluted area*.'¹⁰³ Importantly for the purposes of this report, this presumption was also applicable to cases involving *diffuse* pollution.¹⁰⁴ The ECJ made it clear that if such a link was to be presumed,¹⁰⁵

the competent authority must have *plausible evidence* capable of justifying its presumption, such as the fact that the operator's installation is located close to the pollution found *and* that there is a correlation between the pollutants identified and the substances used by the operator in connection with his activities.

Where the competent authority has such evidence then it could establish the requisite causal link between the operators' activities and the (diffuse) pollution.¹⁰⁶ Operators are, of course, able to attempt to rebut the presumption that their activities have caused any damage through adducing relevant evidence.¹⁰⁷ However, it appears that this will be very difficult in the presence of proximity to the damage and correlation of pollutants. This may have important consequences for operators undertaking similar activities within close proximity to each other. For instance, there may be two operators located close to the site of environmental damage. Each may utilise pollutants in their industrial process which are found at that site. However, this does not mean that both caused the pertinent damage. The rebuttable presumption would render both liable nevertheless, the exception being where the 'innocent' operator could prove their innocence. This may be a difficult task.

⁹³ *ibid* [106] and [116].

⁹⁴ *ibid* [109] (emphasis added).

⁹⁵ *ibid*.

⁹⁶ *ibid*.

⁹⁷ *ibid* [112].

⁹⁸ *Ibid*.

⁹⁹ *ibid* [109].

¹⁰⁰ ELD, art 3.

¹⁰¹ *Raffinerie Mediterranee* (n 89) [55].

¹⁰² *ibid* [57] (emphasis added).

¹⁰³ *ibid* [70].

¹⁰⁴ *ibid* [70].

¹⁰⁵ *ibid* [57].

¹⁰⁶ *ibid* [58].

¹⁰⁷ *ibid* [58].

2.2.2.4. Queensland, Australia: *Environmental Protection Act 1994* (Qld)

The *Environmental Protection Act 1994* of Queensland, Australia, presents an interesting contrast to both the EIA Directive and the ELD. The latter, as we have seen, is somewhat limited in its scope, particularly in relation to its definition of the environment (land, water, and *protected* species and natural habitats) and the high threshold for damage to be deemed to have occurred. The EP Act is important for the purposes of framing the scope of the duty to exercise due diligence in value chains as it creates a duty to *protect* the environment by integrating environmental considerations into decision-making.¹⁰⁸ We find a similar duty in the laws of other Australian provinces, such as the Environment Protection Act 2017 (Vic) of Victoria. This was subject to some important amendments by the Environment Protection Amendment Act 2018 (Vic). These changes will come into force in July 2021, evidencing the contemporary focus upon the development and improvement of such laws in the province. Under section 25(1) of the amended EP Act 2017, '[a] person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable'.

To return to the position in Queensland, under s 319(1) of the EP Act, '[a] person must not carry out any activity that causes, or is likely to cause, *environmental harm* unless the person takes all reasonable and practicable measures to prevent or minimise the harm (the *general environmental duty*).' Whilst the notion of 'environmental harm' is the focus of the duty, not 'environmental damage', the two phrases (though, not necessarily the legal interpretation given to them under discrete legal frameworks) may be viewed as conceptually similar and interchangeable at an abstract level. It is, however, the *threshold* set for determining that 'damage' or 'harm' has occurred that is the distinguishing factor of crucial importance. The same is true for the phrase 'adverse environmental impact'. The threshold for harm (or, indeed, impact) could, in theory, be set lower than that for 'damage'. And this is certainly the case when the respective definitions under the EU ELD and the Queensland's EP Act are contrasted.

The term 'environment' is given an extensive interpretation under the Act, covering physical and biological elements.¹⁰⁹ Its scope is far broader than the ELD's understanding of the environment which, as we have seen, focuses exclusively upon specific and somewhat restrictive interpretations of water, land and protected species and diversity. Under s 8, 'environment' *includes*:

- (a) ecosystems and their constituent parts, *including people and communities*; and
- (b) *all* natural and physical resources; and
- (c) the qualities and characteristics of *locations, places and areas*, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and
- (d) the social, economic, aesthetic and cultural *conditions* that affect, or are affected by, things mentioned in paragraphs (a) to (c).

The use of 'includes' indicates that it is conceivable that the term might be construed more broadly than the explicit wording of the provision indicates. The courts may, therefore, be receptive to arguments that other factors, not mentioned explicitly, ought to fall within the definition of 'environment'.

A wide variety of potential harm is, theoretically, captured under the EP Act.¹¹⁰ **Under s 14(1), the term 'environmental harm' is defined as 'any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.'** Section 15 defines 'environmental nuisance' as '*unreasonable interference or likely interference with an environmental value caused by - (a) aerosols, fumes, light, noise, odour, particles or smoke; or (b) an unhealthy, offensive or unsightly condition because of contamination; or (c) another way prescribed by regulation.*'

Like many frameworks of environmental law, the phrase 'adverse effect' is not explicitly defined under the EP Act. However, s 14(1) informs our understanding of the phrase 'adverse effect' (and, through

¹⁰⁸ Kerrie Sodiq and Jade Jones and Julie Walker, 'Environmental Law and the Economic Impact on Australian Firms' (1998) 20 U Queensland LJ 56, 58.

¹⁰⁹ DE Fischer, 'Can the Law Protect Landscape Values' (2005) 9 NZ J Env'tl L 1, 26

¹¹⁰ Sodiq et al (n 108) 58.

analogy, 'adverse impact') implicitly through its connection to the idea of an 'environmental value'. We have a clear understanding of how the term 'environmental' in the phrase 'adverse environmental impact' ought to be defined through the definition of the environment in s 8. And if we equate an 'adverse' effect with a 'negative' effect, which is likely to be uncontroversial, we may assert that there will be an 'adverse effect' where such a value is impacted negatively (or where there is an environmental nuisance, as defined under the Act).

The phrase 'adverse effect' may be interpreted broadly to include *any* actual or potential adverse effect, including those that are temporary, of low magnitude and infrequent, *if it impacts upon an environmental value*.¹¹¹ Under s 9(a), 'environmental value' is defined as 'a *quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety*.'¹¹² There is, thus, a crucial interaction with the term 'environment' as defined in s 8. An environmental value is 'not a physical thing but qualities or physical characteristics that the physical parts of the environment *represent*.'¹¹³ Thus, 'a tree', 'a forest' or 'an endangered species' is not an environmental value but may represent environmental values such as 'biodiversity', 'conservation value' and 'biological integrity'.¹¹⁴ Nor would 'water' be an environmental value, but 'the suitability of water for drinking' would be.¹¹⁵ McGrath lists the following as environmental values:

Total Quality of Life	
Ecological Value	Human Value
intrinsic value	aesthetic value
conservation value	recreational value
biodiversity	resource value
biological integrity	agricultural value
atmospheric integrity	industrial value
hydrospheric integrity	society
geospheric integrity	
available energy	

Source: Chris McGrath, *Synopsis of the Queensland Environmental Legal System* (4th ed, Environmental Law Publishing 2006), Sch 2

The idea of 'environmental harm' under the EP Act covers 'any' adverse effect on an environmental value, meaning that it is not limited to pollution. It has been held to cover effects such as cutting down trees.¹¹⁶ And it is foreseeable that it could encompass the emission of greenhouse gases and consequential climate change.¹¹⁷ The harm may be a direct or indirect result of an activity or it may result from the activity alone or from the *combined* effects of the activity and other activities or factors (s 14(2)). This alleviates the need for a correlation to be drawn between an activity and a corresponding environmental harm, including a specific climate change impact.¹¹⁸

¹¹¹ The idea of 'environmental harm' under EP Act may be contrasted with the term 'harm' in section 4(1) of the amended *Environment Protection Act 2017* of Victoria. The idea of 'environmental value' is absent in the latter. There, 'harm' means an 'adverse effect on human health or the environment (of whatever degree or duration)' and includes: (a) an *adverse effect* on the amenity of a place or premises that unreasonably interferes with or is likely to unreasonably interfere with *enjoyment* of the place or premises; or (b) a *change to the condition* of the environment so as to make it offensive to the senses of *human beings*; or (c) anything prescribed to be harm for the purposes of this Act or the regulations.

¹¹² It is also defined as 'another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.' (s 9(b))

¹¹³ Chris McGrath, *Synopsis of the Queensland Environmental Legal System* (4th ed, Environmental Law Publishing 2006) 18 <<http://www.legacy.envlaw.com.au/sqels4.pdf>> accessed 8 July 2020 (emphasis added).

¹¹⁴ *ibid.*

¹¹⁵ *ibid.*

¹¹⁶ *Maroochy Shire Council v Barnes* [2001] QPELR 475; [2002] QPELR 6.

¹¹⁷ Donna Green and Kristy Ruddock, 'Could Litigation Help Torres Strait Islanders Deal with Climate Impacts' (2009) 9 *Sustainable Dev L & Pol'y* 23, 28.

¹¹⁸ Justine Bell-James and Briana Collins, 'Queensland's Human Rights Act: A New Frontier for Australian Climate Change Litigation' (2020) 43 *UNSWLJ* 3, 35.

There are two further categorisations of ‘environmental harm’. Under s 16(1), ‘*material environmental harm*’ is defined as environmental harm:

- (a) that is not trivial or negligible in nature, extent or context; or
- (b) that causes actual or potential loss or damage to *property* of an amount of, or amounts totalling, more than the threshold amount (\$5,000) but less than the maximum amount (\$50,000); or
- (c) that results in costs of more than the threshold amount (\$5,000) but less than the maximum amount (\$50,000) being incurred in taking appropriate action to prevent or minimise the harm; and rehabilitate or restore the *environment* to its condition before the harm.

In contrast, ‘*serious environmental harm*’ is defined under s 17 as environmental harm:

- (a) that is irreversible, of a high impact or widespread; or
- (b) caused to an area of high conservation value; or an area of special significance; or
- (c) that causes actual or potential loss or damage to *property* of an amount of, or amounts totalling, more than the threshold amount (\$50,000); or
- (d) that results in costs of more than the threshold amount (\$50,000) being incurred in taking appropriate action to prevent or minimise the harm; and rehabilitate or restore the *environment* to its condition before the harm.

2.2.2.5. Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (the ‘2020 Sustainable Investment Regulation’)

The 2020 Sustainable Investment Regulation responds to the recognition that given the systemic nature of global environmental challenges there is a need for a systemic and forward-looking approach to environmental sustainability that addresses growing negative trends, such as climate change, the loss of biodiversity, the global overconsumption of resources.¹¹⁹ It is an acknowledgment of the fact that achievement of the Sustainable Development Goals (SDGs) in the EU requires the channelling of capital flows towards ‘sustainable investments’.¹²⁰

Under Article 3, an economic activity qualifies as ‘environmentally sustainable’ where it, inter alia, does not ‘significantly harm’ the environmental objectives set out in Article 9. Thus, an activity will be environmentally *unsustainable* where it ‘significantly’ harms environmental objectives. There is a similarity here with the idea of ‘environmental values’ set out in the EP Act examined in the previous subsection. The key difference between the two frameworks is that the 2020 Sustainable Investment Regulation does a far more effective job than the EP Act in, first, setting out directly and explicitly what the pertinent ‘environmental objectives’ are and, second, providing much needed clarity on whether there will be deemed to have been ‘significant harm’ to them. The EP Act leaves the idea of ‘environmental values’ to be defined by the courts.

The Regulation may offer insight into the meaning that could be accorded to the phrase ‘adverse environmental impact’. To be clear, from this perspective, there will be an ‘adverse environmental impact’ when certain environmental objectives are ‘significantly’ harmed.

Under article 9, the following are deemed to be ‘environmental objectives’:

- (a) climate change mitigation;
- (b) climate change adaptation;
- (c) the sustainable use and protection of water and marine resources;
- (d) the transition to a circular economy;
- (e) pollution prevention and control;
- (f) the protection and restoration of biodiversity and ecosystems.

¹¹⁹ 2020 Sustainable Investment Regulation, recital 7.

¹²⁰ *ibid* recital 9.

And under article 17, considering the life cycle of the products and services provided by an economic activity, that economic activity shall be considered to 'significantly harm':

- (a) climate change mitigation, where that activity leads to significant greenhouse gas emissions;
- (b) climate change adaptation, where that activity leads to an increased adverse impact of the current climate and the expected future climate, on the activity itself or on people, nature or assets;
- (c) the sustainable use and protection of water and marine resources, where that activity is detrimental to the good status or the good ecological potential of bodies of water, including surface water and groundwater; or to the good environmental status of marine waters;
- (d) the circular economy, including waste prevention and recycling, where:
 - i. that activity leads to significant inefficiencies in the use of materials or in the direct or indirect use of natural resources such as non-renewable energy sources, raw materials, water and land at one or more stages of the life cycle of products, including in terms of durability, reparability, upgradability, reusability or recyclability of products;
 - ii. that activity leads to a significant increase in the generation, incineration or disposal of waste (except incineration of non-recyclable hazardous waste); or
 - iii. the long-term disposal of waste may cause significant and long-term harm to the environment;
- (e) pollution prevention and control, where that activity leads to a significant increase in the emissions of pollutants into air, water or land, as compared with the situation before the activity started; or
- (f) the protection and restoration of biodiversity and ecosystems, where that activity is significantly detrimental to the good condition and resilience of ecosystems; or detrimental to the conservation status of habitats and species.

2.2.2.6. Scotland, UK: Regulatory Reform (Scotland) Act 2014

Under s 40(1) of the Regulatory Reform (Scotland) Act 2014, it is an *offence* for a person to (a) act, or permit another person to act, in a way that causes or is likely to cause *significant environmental harm*, or (b) *fail to act*, or *permit another person not to act*, in a way such that (in either case) the failure to act causes or is likely to cause significant environmental harm.

Under s 17(2), 'environmental harm' is defined as meaning:

- (a) harm to the health of human beings or other living organisms,
- (b) harm to the quality of the environment, including—
 - (i) harm to the quality of the environment taken as a whole,
 - (ii) harm to the quality of air, water or land, and
 - (iii) other impairment of, or interference with, ecosystems,
- (c) offence to the senses of human beings,
- (d) damage to property, or
- (e) impairment of, or interference with, amenities or other legitimate uses of the environment.

Environmental harm is deemed to be 'significant' under s 40(9) if (a) it has or may have *serious adverse effects*, whether locally, nationally or on a wider scale, or (b) it is caused or may be caused to an area designated in an order by the Scottish Ministers for the purposes of this section. However, the phrase 'serious adverse effects' is not defined under the Act.

Under s 41(1)-(2), where a court convicts a person of an offence under section 40(1), and it appears to the court that it is within the power of the person to remedy or mitigate the significant environmental harm to which the conviction relates, the court may, *in addition to or instead of dealing with the person in any other way*, order the person to take such steps as may be specified in the order to remedy or mitigate the harm.

2.2.2.7. US: Comprehensive Environmental Response, Compensation, and Liability Act, 1980

CERCLA was designed to clean up sites contaminated from a release of hazardous waste, as well as preventing contamination of future sites by assigning liability to parties involved.¹²¹ The framework requires the parties to pay ‘damages’ for the clean-up of such sites.¹²² §107(a)(1-4) asserts that damages may be sought from owners, operators, arrangers, and transporters. These are known as potentially responsible persons (PRPs). Under §101(6), the term ‘damages’ is defined as ‘injury or loss of natural resources’ as set forth in particular statutory provisions. Under §107(a)(4)(C), PRPs may be liable ‘for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release’. The phrase ‘injury or loss to natural resources’ – what the EU ELD would refer to as ‘environmental damage’ – is not defined in CERCLA. Breen notes that, ‘Congress consciously did not provide precise means for measuring damage..., providing instead that the President is to promulgate regulations measuring damages.’¹²³

§101(16) defines ‘natural resources’ as

land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States..., any State or local government, any foreign government, any Indian tribe...¹²⁴

CERCLA, therefore, limits the definition of ‘natural resources’ to resources *held in trust* for the public. This would cover, for instance, parkland, national and state forests, military installations, government-owned reservations and lakes.¹²⁵ The reference to ‘other such resources’ means that the list is open-ended as it not restricted to the resources listed. However, it does not specifically reference cultural resources.¹²⁶ And in *Ohio v. U.S. Dep’t of the Interior*, the court made clear that ‘damage to private property—absent any government involvement, management or control—is *not* covered by the natural resource damage provisions of [CERCLA].’¹²⁷

In the case of an injury to, destruction of, or loss of natural resources, the liability is to the United States Government and to any relevant State or Indian tribe.¹²⁸ Suits for natural resource damages must be brought by designated federal and state trustees of the injured resources. They cannot be brought by private parties. The President, or the authorized representative of any State, acts *on behalf* of the public as trustee of such natural resources to recover such damages.¹²⁹ Sums recovered by the US Government as trustee are only to be used to restore, replace, or acquire the equivalent of such natural resources.¹³⁰ It, therefore, covers the costs of restoring injured natural resources to their baseline condition, compensation for the interim loss of injured resources pending recovery, and the reasonable costs of a damage assessment.

¹²¹ Legal Information Institute (LII), ‘Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)’ (Cornell Law School, undated), <https://www.law.cornell.edu/wex/comprehensive_environmental_response_compensation_and_liability_act_%28cercla%29>.

¹²² *ibid.*

¹²³ Barry Breen, ‘CERCLA’s Natural Resource Damage Provisions: What Do We Know So Far?’ (1984) 14 ELR 10304, 10306.

¹²⁴ *ibid.*

¹²⁵ Mehron Azarmehr, ‘Natural Resources Damages Under CERCLA § 107: How the Liability Rules Differ Between Actions for Natural Resource Damages and Response Costs’ (1992) 2 ELR 10655, 10657

¹²⁶ Sarah Peterman, ‘CERCLA’s Unrecoverable Natural Resource Damages: Injuries to Cultural Resources and Services’ (2011) 28 Ecology Law Currents 17, 19.

¹²⁷ *Ohio v. U.S. Dep’t of the Interior*, 880 F.2d 432, 460 (D.C. Cir. 1989) (emphasis added).

¹²⁸ CERCLA, §107(f)(1).

¹²⁹ *ibid.*

¹³⁰ *ibid.*

2.2.3. Analogous Terms

There are variety of terms, including 'pollution damage' and 'damage', within International Conventions that may aid interpretation of the phrase 'adverse environmental impact'

Under art 1(6) of the International Convention of 27 November 1992 on Civil Liability for Oil Pollution Damage, 'pollution damage' means: (a) *loss or damage* caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, *provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken*; (b) the costs of preventive measures and further loss or damage caused by preventive measures.' And under art 2(7): 'Preventive measures' means 'any reasonable measures taken by any person after an incident has occurred to prevent or minimize pollution damage.' The International Convention of 23 March 2001 on Civil Liability for Bunker Oil Pollution Damage adopts a very similar definition at art 1(9). The term 'environment' is not defined in either Convention.

Under art 1(6) of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 2010 (the '2010 HNS Convention'), the term 'damage' means:

- (a) loss of life or personal injury on board or outside the ship carrying the hazardous and noxious substances caused by those substances;
- (b) loss of or damage to property outside the ship carrying the hazardous and noxious substances caused by those substances;
- (c) loss or damage by contamination of the *environment* caused by the hazardous and noxious substances, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken; and
- (d) the costs of preventive measures and further loss or damage caused by preventive measures.

A similar definition is adopted under art 1(10) of the Convention of 10 October 1989 on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation and art 2(7) of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment (the 'Lugano Convention'). Under art 2(10) of the Lugano Convention, the term 'environment' includes

- natural resources both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors;
- property which forms part of the cultural heritage; and
- the characteristic aspects of the landscape.

3. Remedying Environmental Damage/Harm

As we have seen, the OECD views the primary purpose of due diligence as being to avoid causing or contributing to adverse impacts on people, the environment and society, and to seek to prevent such impacts through business relationships.¹³¹ However, where these impacts cannot be avoided, it ought to enable enterprises to mitigate them, prevent their recurrence and *remediate* them.¹³²

The ELD provides a useful 'case-study' to examine the remediation requirements imposed upon operators for causing environmental damage. Annex II sets out a framework to help *select* the most appropriate measures to ensure the remediation of environmental damage. In this context, remediation refers to any action or actions taken to restore, rehabilitate, or replace damaged natural resources and the services

¹³¹ OECD, *OECD Due Diligence Guidance* (n 1) 18.

¹³² *ibid.*

they provide.¹³³ The guidelines were introduced, in part, to prevent polluters from being held liable for disproportionately costly restoration measures or a disproportionate claim.¹³⁴

By way of context, it is important to note that under the ELD, where it is established that relevant damage has arisen under either regime, the duty rests with the competent authority to: (a) establish *which* operator caused the damage; (b) assess the *significance* of the damage, and (c) determine the remedial *measures* to be taken by the operator.¹³⁵ Unless the competent authority has undertaken the works itself, the operator is to identify, in accordance with the guidance provided Annex II of the ELD, potential remedial measures and submit them to the competent authority for its approval.¹³⁶ Under the ELD, the operator is to bear the costs of the agreed remedial measures.¹³⁷ If the competent authority decides to undertake the remedial measures itself, it is to recover the costs it has incurred from the operator.¹³⁸ It may do so through obtaining security over the operator's property or other appropriate guarantees from the operator.¹³⁹ The competent authority is, however, not obliged to undertake the works where the operator is, for instance, financially unable to undertake them.¹⁴⁰

3.1. Damage to Water or Protected Species or Natural Habitats

Remediation of damage to water or protected species or natural habitats is achieved through restoration of the environment to its 'baseline condition'. This is defined as the condition at the time of the damage of the natural resources and services that would have existed *had the environmental damage not occurred*, estimated on the basis of the *best information available*.¹⁴¹ It is to be achieved by way of:

(a) Primary remediation: this seeks to return the damaged natural resources and/or impaired services to, or towards, baseline condition. This could include actions to directly restore the natural resources and services on an accelerated time frame, or through natural recovery.

(b) Complementary remediation: where the damaged natural resources and/or services do not return to baseline, then complementary remediation will be undertaken. This is to address the fact that primary remediation has not fully restored the damaged natural resources and/or services. It seeks to provide a level of natural resources and/or services *similar* to that which would have been provided if the damaged site had been returned to its baseline condition. Complementary remediation may occur at an *alternative* site. Where possible and appropriate, the alternative site should be geographically linked to the damaged site.

(c) Compensatory remediation: this refers to action taken to compensate for *interim losses*¹⁴² of natural resources and/or services which occur from the date of the damage occurring to when primary remediation is complete. This compensation consists of *additional improvements* to protected natural habitats and species or water at either the damaged site or at an alternative site, not financial compensation to members of the public.

¹³³ Gary Bigham, Nicholas Gard, Carlo Monti and Cristiano Pozzi, 'The Remediation Regimes' in Lucas Bergkamp and Barbara Goldsmith (eds), *The EU Environmental Liability Directive: A Commentary* (OUP 2013) 95-117, 95.

¹³⁴ Edward Brans, 'The Environmental Liability Directive: Legal Background and Requirements' in Josh Lipton, Ece Özdemiroğlu, David Chapman and Jennifer Peers (eds), *Equivalency Methods for Environmental Liability: Assessing Damage and Compensation Under the European Environmental Liability Directive* (Springer Netherlands 2018) 3-20, 8.

¹³⁵ ELD, art 11(2).

¹³⁶ ELD, art 7(1).

¹³⁷ ELD, art 8(1).

¹³⁸ ELD, art 8(2).

¹³⁹ ELD, art 8(2).

¹⁴⁰ ELD, art 6(3).

¹⁴¹ ELD, art 2(14).

¹⁴² The term 'interim losses' refers losses which result from the fact that the damaged natural resources and/or services are not able to perform their ecological functions or provide services to other natural resources or to the public until the primary or complementary measures have taken effect.

Any significant risk of *human* health being adversely affected is to be removed. The competent authority is entitled to decide that no *further* remedial measures should be taken if the cost of the remedial measures that should be taken to reach baseline condition (or similar level) would be *disproportionate* to the environmental benefits to be obtained.¹⁴³ This means that the environment may not be returned to its baseline condition, and the policy driving the polluter-pays principle not being achieved in full.

The *reasonable* remedial options should reflect best available technologies, with each option to be evaluated according to the:

- effect on public health and safety,
- cost of implementing it,
- likelihood of success,
- extent to which it will prevent future damage,
- extent to which its implementation will avoid collateral damage,
- extent to which it benefits each component of the natural resource and/or service,
- extent to which it takes account of relevant social, economic and cultural concerns and other relevant factors specific to the locality,
- length of time it will take to restore the environmental damage,
- extent to which it achieves the restoration of site of the environmental damage, and
- geographical linkage to the damaged site.

The decision on the most appropriate option(s) will require these criteria to be weighed cumulatively; there is no hierarchy between them.¹⁴⁴ The *reasonableness* requirement generates tension with the polluter-pays principle as there is an objective standard/limitation placed upon what is required to be paid. It also creates potential for disparity of treatment between polluters.

When determining the scale of *complementary* and *compensatory* measures, resource-to-resource or service-to-service equivalence approaches should be considered first,¹⁴⁵ more on which will be said shortly. Actions that provide natural resources and/or services of the same type, quality and quantity as those damaged should be explored in the first instance.¹⁴⁶ Where this is not possible, alternative natural resources and/or services are to be provided (e.g. a reduction in quality could be offset by an increase in the quantity of remedial measures.)¹⁴⁷ If it is not possible to use the first choice resource-to-resource or service-to-service equivalence approaches, alternative valuation techniques are to be used (e.g. monetary valuation).¹⁴⁸ The competent authority may prescribe the method to determine the extent of the necessary remedial measures.¹⁴⁹ If valuation of the lost resources and/or services is practicable, but valuation of the replacement natural resources and/or services cannot be performed within a reasonable time-frame or at a reasonable cost, then the competent authority may choose remedial measures whose cost is equivalent to the estimated monetary value of the lost natural resources and/or services.¹⁵⁰

3.2. Land Damage

The framework of primary, complementary and compensatory remediation measures do not apply to land damage. Remediation of damage to land is to comprise measures necessary to ensure, as a minimum, that the relevant contaminants are removed, controlled, contained or diminished so that the contaminated land, taking account of its current use or approved future use at the time of the damage, *no longer poses any significant risk of adversely affecting human health*. There is no requirement for the land to be taken back

¹⁴³ ELD, Annex II, para 1.3.3.

¹⁴⁴ Edward Brans, 'The Environmental Liability Directive: Legal Background and Requirements' in Josh Lipton, Ece Özdemiroğlu, David Chapman and Jennifer Peers (eds), *Equivalency Methods for Environmental Liability: Assessing Damage and Compensation Under the European Environmental Liability Directive* (Springer Netherlands 2018) 3-20, 17.

¹⁴⁵ ELD, Annex II, para 1.2.2.

¹⁴⁶ *ibid.*

¹⁴⁷ *ibid.*

¹⁴⁸ ELD, Annex II, para 1.2.3.

¹⁴⁹ *Ibid.*

¹⁵⁰ *ibid.*

to baseline condition which is seen as a more stringent standard.¹⁵¹ This category of damage, therefore, necessitates a lower remediation standard and less remedial action than would be required in relation to water or biodiversity damage.¹⁵²

The presence of such risks shall be assessed through risk-assessment procedures taking into account the characteristic and function of the soil, the type and concentration of the harmful substances, preparations, organisms or micro-organisms, their risk and the possibility of their dispersion. A natural recovery option (i.e. no direct human intervention) may be deemed acceptable. As primary, complementary and compensatory measures do not apply to land damage cases, interim losses are *not* to be considered when selecting the most appropriate measure(s) to remediate land damage.¹⁵³ Thus, the question as to whether natural resources and services have been impaired during the period of restoration is not relevant.¹⁵⁴ The operator is, therefore, relieved of liability for interim losses where their activities have only caused to land (that is not a protected habitat and is governed by the ELD).

3.3. The Essential Role of Financial Security

The efficacy of a due diligence duty may be hindered by the bankruptcy or financial deterioration of the operator. **There is little point in developing a due diligence duty, which imposes robust remediation obligations in respect of breaches of that duty (e.g. failure to discharge the duty resulted in environmental harm being caused), if the EU-based parent company will not, ultimately, be in a financial position to pay for them.** If they are unable financially to bear the associated costs, such as remedying environmental harm, the burden will necessarily fall on other stakeholders, such as local communities, taxpayers, and the environment.

A potentially powerful means of avoiding this prospect and ensuring that the important policy objectives driving the polluter-pays principle are fulfilled is to implement legal requirements for operators to provide 'financial security'¹⁵⁵ for their environmental obligations. This could be required at pertinent points throughout the value chain, with determination of whether appropriate financial security had been made being a requirement of properly discharging the due diligence duty. An operator (or a party related to them, such as a parent company or other group company) provides financial security where they provide and maintain evidence, in the form of a certificate or other documentation, that provision has been made for environmental obligations that the operator *may* become subject (e.g. an industrial accident, such as an oil or chemical spill) or those that it *will* be subject (e.g. an obligation under a permit, licence or other authorisation to close a mine at the end of its functional life). Depending upon the type of obligation (i.e. foreseen or unforeseen) this could comprise measures such as insurance, a bank guarantee, a bond or a cash deposit with the competent authority. It could also include contributions to an industry fund.

Whilst there are a number of measures at the disposal of operators, there are three useful characteristics which competent authorities may use to assess the provision offered by an operator.¹⁵⁶ Funds represented by the measure(s) should be:

1. **Secure** in the event of the operator's bankruptcy, i.e. the funds or assets utilised for the provision are 'ring-fenced' and not rendered available to the general body of creditors;

¹⁵¹ Fogleman, 'Landowners' liability for remediating contaminated land' (n 54) 9.

¹⁵² SWD(2016) 121 final, Commission Staff Working Document Refit Evaluation of the Environmental Liability Directive, 13, fn 27.

¹⁵³ Edward Brans, *No.5: Legal analysis* (November 2006) Resource Equivalency Methods for Assessing Environmental Damage in the EU (REMEDE), Sixth Framework Programme, Priority 8.1 – 1.5, 16 <http://web.archive.org/web/20131228023323/http://www.envliability.eu/docs/LegalAnalysis_D5_PRDF_071206_FINAL.pdf>

¹⁵⁴ *ibid.*

¹⁵⁵ The terms 'bonding requirements', 'financial assurance', 'financial provision', 'financial guarantee' and 'or their equivalent' are often used, and these terms may be considered to be interchangeable with the term financial security.

¹⁵⁶ Irish Environmental Protection Agency: Office of Environmental Enforcement, *Guidance on Financial Provision for Environmental Liabilities* (2015) 3 <<https://www.epa.ie/pubs/advice/licensee/fp/financiaprovisionsreport.pdf>>.

2. **Sufficient**, i.e. the level of provision made should cover the costs of a *third-party* undertaking the requisite (but outstanding) works, and
3. **Available when required**, i.e. there should be a ready source of private funds to undertake the requisite works when needed.

The primary function of financial security may be seen to lie in its capacity to facilitate *performance* of environmental obligations at an operator's own private cost.¹⁵⁷ However, financial security also exhibits significant potential to motivate operators to reduce their environmental risk, this being defined as the probability that their activities, and potentially those of companies further down the value chain, will cause environmental harm.¹⁵⁸ Whilst this potential may arise in a variety of guises, broadly, it presents itself through the contractual governance of the operator's behaviour (e.g. under the terms and conditions of an insurance policy) and the provision of economic incentives to improve safety levels and/or its financial strength. A financial security measure will possess a preventive capacity where it attaches a *price*, defined broadly, to an operator's choice – or those of others in the value chain – as to whether, and indeed how, they would undertake an environmentally dangerous activity: an insurance premium, a collateral requirement which reflected the level of risk they exhibited etc.¹⁵⁹ This price and, most importantly, its *responsiveness* to their implementation of (environmental) risk-reducing measures could motivate them to modify their behaviour.¹⁶⁰

There is, however, no requirement for financial security under the ELD, the principal environmental liability framework under EU law. The European Parliament has, however, recommended that mandatory financial security be introduced.¹⁶¹ Nevertheless, only a handful of Member States (Bulgaria, the Czech Republic, Portugal, Slovakia and Spain) have introduced *mandatory* financial security regimes for potentially hazardous industrial activities. That said, financial security has long been a requirement in international conventions concerning marine oil pollution and nuclear facilities.¹⁶² And it is common in EU environmental law in relation to coverage of the costs associated with environmental obligations under a permit.¹⁶³ These are, of course, known, foreseen obligations as contrasted with those arising by fortuity following a pollution incident. Foreseen obligations are widely applicable in the energy sector, where they may cover closure of a coal mine and post-closure water monitoring requirements, proper abandonment of an oil and gas well or decommissioning of energy infrastructure. The costs can be staggering. For instance, in the UK alone, it is estimated that it will cost between £99bn and £232bn to decommission civil nuclear assets,¹⁶⁴ £45bn-77bn for oil and gas infrastructure,¹⁶⁵ and £1.28bn-3.64bn for offshore wind farms.¹⁶⁶ Significantly, taxpayers and the environment will bear the burden when an operator does not fulfill their end-of-life obligations. However, often there is a vast gap between the level of financial security provided by operators and the estimated costs of undertaking the pertinent end-of-life

¹⁵⁷ Colin Mackie and Laurel Besco, 'Rethinking the Function of Financial Assurance for End-of-Life Obligations' (2020) 50 Environmental Law Reporter 7 10573.

¹⁵⁸ Colin Mackie, 'The Regulatory Potential of Financial Security to Reduce Environmental Risk' (2014) 26(2) JEL 189, 191.

¹⁵⁹ *ibid* 213.

¹⁶⁰ *ibid*.

¹⁶¹ European Parliament resolution of 26 October 2017 on the application of 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 (the 'ELD') (2016/2251(INI)), para 29.

¹⁶² See, e.g. Convention on Civil Liability for Oil Pollution Damage (the 'Civil Liability Convention'), art VII (mandatory insurance for liability for oil pollution required in the UK by Merchant Shipping Act 1995, s 163); Convention on Third Party Liability in the Field of Nuclear Energy 1960 (as amended) (the 'Paris Convention'), art 10 (mandatory financial security for claims for bodily injury and property damage from nuclear matter required in the UK by Nuclear Installations Act 1965, s 19).

¹⁶³ See, e.g., Directive 2006/21/EC on the management of waste from extractive industries [2006] OJ L102/15, art 14 (the 'Mining Waste Directive'); Council Directive 1999/31/EC on the landfill of waste [1999] OJ L182/1 (the 'Landfill Directive'), art 8(a)(iv); Directive 2009/31/EC on the geological storage of carbon dioxide [2009] OJ L140/114, art 19(1).

¹⁶⁴ Nuclear Decommissioning Authority, *Nuclear Provision: the cost of cleaning up Britain's historic nuclear sites* (2019).

¹⁶⁵ National Audit Office, *Report by the Comptroller and Auditor General, Oil and Gas in the UK—Offshore Decommissioning* 4 (2019) (HC 1870 Session 2017-2019).

¹⁶⁶ The Department for Business, Energy & Industrial Strategy, *Cost Estimation and Liabilities in Decommissioning Offshore Wind Installations: Public Report, Final* 33 (2018).

obligations. For example, at January 2019, against estimated future decommissioning costs to operators in the offshore oil and gas sector of between £45bn-77 billion, the UK's Department of Business, Energy and Industrial Strategy (BEIS) had only required operators to set aside £844 million in financial provision.¹⁶⁷ This means that the financial security held by BEIS only covers between 1.88% and 1.1% of the sector's total estimated liabilities. The issue may be even more troublesome in many developing countries with weaker legal frameworks. **Nevertheless, the general inference to be drawn is that there is greater political will to impose mandatory financial security regimes where obligations are certain to arise. This often dissipates when the obligations are a *fortuity*.**

There are five main ways in which financial provision may be made. First, monies or assets may be set aside with a third-party, such as a bank or a trustee, in favour of the competent authority (e.g. escrow accounts and trust funds). Second, an operator (or, in theory, a company associated with them) may grant the competent authority a *charge* of a valuable asset, such as real estate, in their ownership. Third, *risk may be transferred* to a third-party, such as an insurer or bank, in return for a premium, fee or charge (e.g. insurance, bank guarantees and surety bonds). Fourthly, the *financial strength* of the operator or a company associated with it (i.e. its parent company or another group company) may be 'tested' and accepted of as evidence of financial security in and of itself (e.g. self-insurance and parent company guarantees). Finally, the operator, alongside other operators, could be required to contribute to a *compensation fund* or other industry fund.¹⁶⁸

The competent authority may enable these five categories of measures to be used individually or in *combination*. Thus, the operator (or a company or companies affiliated to them) could use more than one to evidence capacity to meet their environmental obligations, thereby reducing the risks associated with any single category. Insurance has proven to be the most popular instrument to cover environmental liability under the ELD, followed by bank guarantees, funds and bonds.¹⁶⁹

4. Natural Resource Damage Assessment (NRDA)

NRDA is a process which emphasises the use of *remediation measures* following damage/harm to the environment to offset the loss of natural resources and the services that they provide, rather than merely seeking to collect monetary damages from the polluter.

Where a polluter's activities have caused damage/harm to the environment, the polluter may be required to: (1) remediate the environment; and (2) compensate the public for the natural resources/services which were lost during the period in which the environment was impaired.¹⁷⁰ This 'compensation' is resource- or service-based, *not monetary*. A process termed 'equivalency analysis' is used by competent authorities to determine: (1) the type and amount of natural resources and services that are lost over time as a result of the damage and; (2) the type and amount of complementary and compensatory remediation actions needed to offset that loss. It seeks to ensure that polluters neither under-compensate nor over-compensate for losses. **The focus is upon complementary and/or**

¹⁶⁷ National Audit Office (n 165).

¹⁶⁸ The European Parliament asked the Commission to consider establishing a European fund for damage caused by activity governed by the ELD, 'for insolvency risks and only in cases where financial security markets fail' and also for cases of 'large-scale accidents, when it is impossible to trace the operator responsible for the damage' (European Parliament resolution of 26 October 2017 on the application of 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 (the 'ELD') (2016/2251(INI)), para 29).

¹⁶⁹ European Commission, 'Report to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, under Article 14(2) of Directive 2004/35/EC on the environmental liability with regard to the prevention and remedying of environmental damage' COM (2010) 581 final, para 4.1.1.

¹⁷⁰ Joshua Lipton, Ece Özdemiroğlu, David Chapman and Jennifer Peers (eds), *Equivalency Methods for Environmental Liability: Assessing Damage and Compensation Under the European Environmental Liability Directive* (Springer Netherlands 2018) 23. It will be recalled that under the ELD, 'natural resource' means protected species and natural habitats, water and land: ELD, art 2(12). And 'services' and 'natural resources services' mean the functions performed by a natural resource for the benefit of another natural resource or the public: ELD, art 2(13).

compensatory remediation; equivalency analysis does not seek to determine what primary remediation should be undertaken. That said, quantification of the benefits of primary remediation *with a view to determining any residual damage* ripe for complementary and/or compensatory remediation is a key input into an equivalency analysis.

It is important to note that equivalency analysis is merely one step in the process of a deciding how remediation ought to proceed after damage has occurred as there may be other site and incident-specific considerations that relevant stakeholders may wish to consider in determining the level of remediation required to offset the damage.¹⁷¹

4.1. Equivalency Analysis: methods

There are three main methods of equivalency analysis: service-to-service, resource-to-resource and value equivalency. Prior to examining these, the meaning of core common terms will be outlined:¹⁷²

- **Debit:** an expression of the quantity of *loss* suffered as a result of the environmental damage/harm; it may be multidimensional as the damage/harm may have negative effects on a number of different species, habitats, ecosystem functions, and human values.
- **Credit:** an expression of the natural resource or service *benefit* gained through complementary and compensatory remediation.
- **Metric(s):** one or more *measurements of loss*, usually determined in close consultation with relevant environmental scientists, which serve as indices of keystone natural resources or services subject to damage/harm. The same metric must be used to express the total damage/harm (debit) and the benefit of remediation (credit).
- **Scaling:** the process whereby the expected amount of benefit (i.e. credit) generated from the remediation is made to *equal* the debit, when quantified in terms of the same metric.¹⁷³
- **Discounting:** the use of a discount rate (e.g. 3%) to reflect the fact that, holding all other factors constant, losses from damage/harm and gains from remediation accrue over different time periods and services gained from remediation conducted in the future are less valuable to the public than services available today.¹⁷⁴ It permits gains and losses can, therefore, be reflected in their *present day value*.

4.1.1. Service-to-service

With this method, also known as Habitat Equivalency analysis (HEA), losses are expressed in terms of habitat and are offset by remediation of similar habitat.¹⁷⁵ Equivalent habitats are assumed to provide equivalent services and so lost services can be compensated for by the provision of acres of additional habitat.¹⁷⁶ This particular form of equivalency analysis is intended for use when the service losses arising

¹⁷¹ Lipton et al (n 170) 23.

¹⁷² The definitions are taken from the eftec and Stratus Consulting, *Environmental Liability Directive: Training Handbook and Accompanying Slides*, Contract Reference No. 070307/2012/621542/SER/A1 (February 2013) 50.

¹⁷³ Scaling has three broad steps: (1) quantification of the total debits caused by the damage; (2) quantification of the credit expected per unit of remediation; and (3) division of the total debit by the unit credit to determine the total amount of credits (i.e. remediation) needed to offset the loss: Lipton et al (n 170) 38.

¹⁷⁴ David Chapman and Katherine LeJeune, *6A: Review Report on Resource Equivalence Methods and Applications* (July 2007) Resource Equivalency Methods for Assessing Environmental Damage in the EU (REMEDE), Sixth Framework Programme, Priority 8.1 – 1.5, 5
<http://web.archive.org/web/20131228023404/http://www.envliability.eu/docs/REReviewUS_D6A_Stratus_FINA_L.pdf>.

¹⁷⁵ Lipton et al (n 170) 23.

¹⁷⁶ U.S. Department of Commerce: National Oceanic and Atmospheric Administration, 'Habitat Equivalency Analysis' (Damage Assessment, Remediation, and Restoration Program, undated)
<<https://darrp.noaa.gov/economics/habitat-equivalency-analysis>>.

from the pollution incident are primarily *ecological* and not direct human use (e.g. recreation).¹⁷⁷ Services to ecosystems and other ecological resources include habitat for food, shelter, and reproduction; organic carbon and nutrient transfer through the food web; biodiversity and maintenance of the gene pool; and food web and community structure.¹⁷⁸ In HEA, the basic unit of measurement is, typically, a discounted-service-acre-year (DSAY) which represents the value of all of the ecosystem services provided by one acre of the habitat in one year.¹⁷⁹ Once calculated, remediation measures are selected that would adequately offset these DSAYs in the form of acres of remediated habitat.¹⁸⁰

4.1.2. Resource-to-resource

Whilst this method, also known as Resource Equivalency analysis (REA), is fundamentally the same as HEA, its units of quantification differ; losses are expressed in terms of *resource units* (e.g. numbers of fish or birds) as opposed to habitat.¹⁸¹ As this method tries to match the actual lost resources with new ones, it is essential to determine with precision which organisms are lost following a particular impact and which are gained by remediation.¹⁸² The method may be more appropriate than the service-to-service approach where the pollution incident has had a significant effect on *particular* animals or plant populations.¹⁸³ Desvousges et al observe that, in practice, REA is less frequently used as a scaling technique in damage assessments than HEA.¹⁸⁴

4.1.3. Value Equivalency

The underlying premise of techniques in this category is that damage/harm to natural resources and the services they provide can be measured in *monetary terms* and compensated for in terms of physical resource and service provision.¹⁸⁵ Under the **value-to-cost** version, the monetary assessment of the damage/harm ensuing from the incident is set as the budget for remediation, *the benefits of which are not estimated directly*.¹⁸⁶ Under the **value-to-value** version, both the value of damage/harm and the benefits from remediation are measured in monetary terms.¹⁸⁷ **Although compensation may be measured (or scaled) in monetary terms, compensation under the ELD can only be provided in resource-based units, not money.**¹⁸⁸ Though, as detailed below, the ELD does not prevent claimants from bringing claims in civil law against polluters.

In value equivalency, monetary values are based on individuals' preferences for given *changes* in the quality and/or quantity of resources of service.¹⁸⁹ There are two means of measuring preference: (1) individuals' willingness to pay (WTP) money to avoid an environmental loss or to secure a gain; or (2) their willingness to accept money as compensation (WTAC) to tolerate an environmental loss or to forgo a

¹⁷⁷ William Desvousges, Nicholas Gard, Holly Michael and Anne Chance, 'Habitat and Resource Equivalency Analysis: A Critical Assessment' (2018) *Ecological Economics* 143 74, 75.

¹⁷⁸ Chapman and LeJeune (n 174) 2.

¹⁷⁹ U.S. Department of Commerce: National Oceanic and Atmospheric Administration, 'Habitat Equivalency Analysis' (Damage Assessment, Remediation, and Restoration Program, undated) <<https://darrp.noaa.gov/economics/habitat-equivalency-analysis>>.

¹⁸⁰ *ibid.*

¹⁸¹ Lipton et al (n 170) 23.

¹⁸² OECD, *Liability for Environmental Damage in Eastern Europe, Caucasus and Central Asia (EECCA): Implementation of Good International Practices* (OECD Publishing 2012) 20.

¹⁸³ *ibid.* 6.

¹⁸⁴ Desvousges et al (n 177) 75-6

¹⁸⁵ Lipton et al (n 170) 26.

¹⁸⁶ eftec and Stratus Consulting, *Environmental Liability Directive: Training Handbook and Accompanying Slides*, Contract Reference No. 070307/2012/621542/SER/A1 (February 2013) 53.

¹⁸⁷ *ibid.*

¹⁸⁸ David Chapman, Scott Cole and Ece Özdemiroğlu, 'Economic Value for Equivalency Analysis' in Josh Lipton, Ece Özdemiroğlu, David Chapman and Jennifer Peers (eds), *Equivalency Methods for Environmental Liability: Assessing Damage and Compensation Under the European Environmental Liability Directive* (Springer Netherlands 2018) 135-156, 146.

¹⁸⁹ Chapman et al (n 188) 146.

gain.¹⁹⁰ Whilst environmental values which depend upon people's actual use of the environment are referred to as *use values*, those which derive from people's contentment from knowing that environmental resources are preserved even if they do not directly use or interact with them, nor ever will, are referred to as *non-use* or *existence values*.¹⁹¹ Reductions and gains in *use* and *non-use* values will be included in the debit and credit estimates in equivalency analysis conducted in relation to environmental damage arising under the ELD.¹⁹² As these types of values are often not priced in the market, two broad techniques have emerged which can be invoked to determine appropriate monetary values for the equivalency analysis:

4.1.3.1 Revealed preference techniques

These use information about people's *actual* behaviour in markets related to the resources of services being valued to estimate value.¹⁹³ There are two main methods:

Travel cost: this method estimates economic values associated with ecosystems or sites that are used for *recreation* by assuming that the value of the site is reflected in how much people are willing to pay to travel to visit it.¹⁹⁴ Such costs include: costs of transport, accommodation, spending on food and drink and recreational activity.¹⁹⁵ This is then used as a proxy for a market price.¹⁹⁶ Thus, for instance, individuals' WTP to visit the site can be estimated based on the number of trips that they make at different travel costs.

Hedonic analysis: this method is used to estimate economic values for environmental services that *directly affect* market prices, such as housing (or land) prices.¹⁹⁷ This technique reflects the understanding that the value for a good can be divided into component parts.¹⁹⁸ For example, all else held equal, a home near a polluted site will cost less than one far away from it. The difference in housing price affords an estimate of the loss in value flowing from the pollution.¹⁹⁹ This loss in value could then be expressed as the value that a remediation action must create to compensate the public for the pollution.²⁰⁰

4.1.3.2. Stated preference techniques

Stated preference methods use questionnaires to elicit the respondents' WTP for the provision/conservation of a given environmental asset directly or WTAC for the loss of an environmental asset.²⁰¹ Hypothetical markets are presented to a representative sample of the population affected by these changes.²⁰² Answers reflect intentions rather than actual behaviour. There are two main survey-based methods for the valuation of non-market resources:²⁰³

¹⁹⁰ *ibid.*

¹⁹¹ Nick Hanley, 'The Economic Value of Environmental Damage' in Michael Bowman and Alan Boyle (eds), *Environmental Damage in International and Comparative Law: Problems of Definition and Valuation* (OUP 2002) 27-39, 27.

¹⁹² Chapman et al (n 188) 140.

¹⁹³ *ibid* 142.

¹⁹⁴ OECD, *Liability for Environmental Damage in EECCA* (n 182) 18.

¹⁹⁵ Chapman et al (n 188) 142.

¹⁹⁶ Chapman and LeJeune (n 174) 2.

¹⁹⁷ OECD, *Liability for Environmental Damage in EECCA* (n 182) 18.

¹⁹⁸ Chapman and LeJeune (n 174) 2.

¹⁹⁹ OECD, *Liability for Environmental Damage in EECCA* (n 182) 18.

²⁰⁰ Chapman and LeJeune (n 174) 2.

²⁰¹ OECD, *Liability for Environmental Damage in EECCA* (n 182) 18.

²⁰² Julia Martin-Ortega, Roy Brouwer and Harry Aiking, 'Application of a Value-Based Equivalency Method To Assess Environmental Damage Compensation Under The European Environmental Liability Directive' (2011) 92 *Journal of Environmental Management* 1461, 1462-3.

²⁰³ Chapman and LeJeune (n 174) 2.

Contingent valuation method (CVM): individuals are questioned directly about how they value the prevention of a specific environmental damage/harm and the implementation of proposed restoration projects.

Conjoint Analysis: individuals are questioned about how they value the prevention of a specific environmental damage/harm and the implementation of proposed restoration projects, but they are given more choices than CVM.

4.2. Equivalency Analysis and the ELD

Annex II of the ELD states that resource-to-resource or service-to-service equivalence approaches 'should be considered first' to determine the scale of *complementary* and *compensatory* measures to remediate damaged water or protected species or natural habitats (importantly, not land).²⁰⁴ The section then goes on to state that if their use is not possible, alternative valuation techniques are to be used (e.g. monetary valuation).²⁰⁵ Should monetary valuation techniques need to be utilised, the ELD expresses a preference for value-to-value over value-to-cost approaches.²⁰⁶ The competent authority is permitted to prescribe the method to be used.²⁰⁷ This means that there is significant discretionary space for the competent authority to determine which approach is to be utilised.

5. 'Adverse Environmental Impacts' and the Precautionary Principle

This section will consider how the precautionary principle might be reflected in the definition of 'adverse environmental impact'.

By way of context, under EU law, the principle is referred to art 191(2) of the Consolidated Version of the Treaty on the Functioning of the European Union but is not defined there:

Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the *precautionary principle* and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.

The European Commission asserted in its Communication on the precautionary principle in 2000 that is for political decision-makers and, ultimately, the courts to flesh out the principle.²⁰⁸ The Commission has, however, offered useful guidance, making it explicitly clear that,²⁰⁹

[w]hether or not to invoke the Precautionary Principle is a decision exercised where scientific information is *insufficient, inconclusive, or uncertain* and where there are indications that the *possible* effects on the environment, or human, animal or plant health *may be potentially* dangerous and inconsistent with the chosen level of protection.

²⁰⁴ ELD, Annex II, para 1.2.2

²⁰⁵ ELD, Annex II, para 1.2.3.

²⁰⁶ *ibid.*

²⁰⁷ *ibid.*

²⁰⁸ European Commission, COM(2000) 0001 final, Communication from the Commission on the precautionary principle, 9.

²⁰⁹ *ibid.* 7.

The Communication made clear that principle is relevant 'only in the event of a *potential risk*, even if this risk cannot be fully demonstrated or quantified or its effects determined because of the insufficiency or inclusive nature of the scientific data.'²¹⁰

The Court of Justice of the European Union has offered further clarification. For example, in *Dow AgroSciences v Commission*, the court held that,

The precautionary principle constitutes a general principle of Community law...requiring the authorities in question, in the particular context of the exercise of the powers conferred on them by the relevant rules, to take appropriate measures to *prevent specific potential risks* to public health, safety and the environment, *by giving precedence to the requirements related to the protection of those interests over economic interests*.

We can find references to the principle outside of EU law. For instance, Principle 15 of the Rio Declaration on Environment and Development (1992) describes the precautionary approach as follows: 'In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are *threats* of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.' And the UN Convention on Biological Diversity states that 'where there is a *threat* of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat'.²¹¹ These expectations are reflected in Chapter V of the *OECD Guidelines for Multinational Enterprises*, it is asserted that,²¹²

Enterprises should
Consistent with the scientific and technical understanding of the risks, where there are *threats* of serious damage to the environment, taking also into account human health and safety, not use the lack of full scientific certainty as a reason for postponing cost-effective measures to prevent or minimise such damage.

Thus, enterprises need to exercise precaution where two factors are present: (1) the existence of a *risk* and (2) *lack of scientific certainty* on the effects of such action, product or process on human health and the environment, or on the extent of the potential damage.²¹³ This reflects the 'basic premise' of the *OECD Guidelines*, which is that 'enterprises should act *as soon as possible*, and in a *proactive way*, to avoid, for instance, serious or irreversible environmental damages resulting from their activities.'²¹⁴

We can consider how these conceptions of the precautionary principle might be incorporated into a definition of 'adverse environmental impact'. Prior to proposing concrete recommendations, examples of how the principle is presently utilised within that particular context in a variety of legal frameworks from across the globe will be explored. For instance, under s 25(1) of the *Environment Protection Act 2017* of Victoria, Australia, as amended by the *Environment Protection Amendment Act 2018* (Vic),²¹⁵ '[a] person who is engaging in an activity that *may give rise to risks* of harm to human health or the environment from pollution or waste must minimise those risks, *so far as reasonably practicable* (*general environmental duty*)'. The phrase 'may give rise to risks' evidences an inherently precautionary tone and would seemingly cover activities – and their impacts – where there is a lack of scientific certainty on their effects on human health and the environment, or on the extent of the potential damage. Reference to 'so far as reasonably practicable' provides a safe harbour for operators.

²¹⁰ *ibid* 13.

²¹¹ United Nations Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, preamble.

²¹² OECD, *OECD Guidelines for Multinational Enterprises* (2011) 42
<<http://www.oecd.org/daf/inv/mne/48004323.pdf>>.

²¹³ OECD, *Environment and the OECD Guidelines for Multinational Enterprises Corporate Tools and Approaches* (OECD, undated) 18 <<http://www.oecd.org/env/34992954.pdf>>.

²¹⁴ OECD, *OECD Guidelines for Multinational Enterprises* (n 212) 46.

²¹⁵ These changes will come into force in July 2021.

The *Environmental Protection Act 1994* of Queensland provides further steer. Under s 14(1), the term 'environmental harm' is defined as 'any adverse effect, or *potential adverse effect* (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.'²¹⁶ The reference to '*potential adverse effect*' provides space to accommodate the policy driving the precautionary principle.

And the precautionary principle is laid down in Article 20a of the German Constitution. This requires the state to prevent risks to the environment from arising even where cause-and-effect relationships are not fully established scientifically.²¹⁷ A pertinent example can be found in federal law relating to protection of humans, animals and the environment against harmful emissions (Bundesimmissionsschutzgesetz, BImSchG). § 5 BImSchG imposes on operators of industrial compounds (factories, machinery, etc.) a duty of protection and a duty of precaution.²¹⁸ § 5 I (1) No 1 BImSchG deals with the former duty and requires operators to take the measures necessary for preventing *probable environmental impacts* from occurring (so-called 'vorbeugende Gefahrenabwehr'), irrespective of whether these impacts are caused by the industrial compound or by external factors.²¹⁹ Whilst **§ 5 I (1) No 2 deals with the duty of precaution and requires operators to take measures, in accordance with the scientific and technical state of the art ('Stand der Technik', § 3 VI (1) BImSchG), to reduce risks of environmental nuisance whose materialisation is possible yet not sufficiently probable to trigger a duty of protection.**²²⁰ The concrete scope of the latter duty is determined in the light of criteria such as the risk-potential of the emissions, the severity of damages to be expected, and the economic costs of minimising risks.²²¹ The duty of precaution does not, generally, confer rights upon third parties (e.g. to bring an action against the operator for breach of the duty).²²²

6. Criminal Liability

This section will examine a definition of 'environmental crime' that could, if legislators were so inclined, be accorded for the purposes of establishing a criminal liability regime in connection to the due diligence duty. This could sit alongside any administrative and civil liability regimes implemented under a proposed new law, with criminal sanctions being reserved for the most heinous offences. The EU Environmental Crimes Directive will be examined. It is, however, important to recall that the offences of causing 'environmental harm' under legal frameworks in Queensland and Scotland are criminal offences, meaning those definitions can inform our understanding of 'environmental crime'. Those frameworks are relevant and important to this section, but they will not be examined further here.

6.1. EU: Environmental Crimes Directive (ECD)

The ECD implements criminal law measures in an attempt to protect the environment more effectively.²²³ It was introduced in recognition that the existing systems of penalties had not adequately achieved satisfactory compliance with environmental protection laws.²²⁴ The perception was that compliance could and should be strengthened by the availability of criminal penalties.²²⁵ These would demonstrate

²¹⁶ Under s 15, 'environmental nuisance' is defined as 'unreasonable interference or likely interference with an environmental value caused by - (a) aerosols, fumes, light, noise, odour, particles or smoke; or (b) an unhealthy, offensive or unsightly condition because of contamination; or (c) another way prescribed by regulation.'

²¹⁷ Daniel Augenstein, 'Germany Country Report' in Lise Smit et al, *Study on Due Diligence Requirements Through the Supply Chain, Part III: Country Reports* (January 2020) 95-116, 96

²¹⁸ *ibid.*

²¹⁹ *ibid.*

²²⁰ *ibid.*

²²¹ *ibid.*

²²² *ibid.*

²²³ OJ L 328/28 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 (art 1).

²²⁴ ECD, recital 3.

²²⁵ ECD, recital 3.

social disapproval of a qualitatively different nature compared to administrative penalties or a compensation mechanism under civil law.²²⁶ There was deemed to be a particular need for more *dissuasive* penalties for environmentally harmful activities, which typically cause or are likely to cause substantial damage to the air, including the stratosphere, to soil, water, animals or plants, including the conservation of species.²²⁷ It is of note that air and soil are referenced in the recitals explicitly as these receptors are not, *in themselves*, covered by the ELD. This raises the interesting prospect of utilising the criminal law to fill voids left by difficulties in attributing administrative liability, such as that witnessed under the EU ELD, to an economic operator whose activities, or the activities of economic operators further down the value chain, had caused harm to, or degradation of, the environment but this could not be classified as 'environmental damage' as a matter of law.

The legislation listed in the Annexes to the Directive contain provisions that were to be subject to criminal law measures under the ECD. These cover a wide array of legal frameworks, including:

- Council Directive 84/360/EEC of 28 June 1984 on the combating of air pollution from industrial plants,
- Council Directive 91/689/EEC of 12 December 1991 on hazardous waste
- Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances
- Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries
- Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control

Importantly, the ECD does not constrain other systems of liability for environmental damage under Community law or national law.²²⁸ Thus, for example, national laws implementing the requirements of the ECD and the ELD might be applicable to environmental damage arising from the *same* incident. An operator may be subject to administrative liability under the ELD in respect of the costs of remediating environmental damage caused by its operations *in addition* to criminal liability for it.

Under art 3, Member States must ensure that a range of conduct constitutes a criminal offence, when *unlawful* and committed *intentionally* or with at least *serious negligence*,²²⁹ specifically:

- (a) the discharge, emission or introduction of a quantity of materials or ionising radiation into air, soil or water, which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;
- (b) the collection, transport, recovery or disposal of waste, including the supervision of such operations and the after-care of disposal sites, and action taken as a dealer or a broker (waste management), which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;
- (c) the shipment of waste, where this activity is undertaken in a non-negligible quantity, whether executed in a single shipment or in several shipments which appear to be linked;
- (d) the operation of a plant in which a dangerous activity is carried out or in which dangerous substances or preparations are stored or used and which, outside the plant, causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;
- (e) the production, processing, handling, use, holding, storage, transport, import, export or disposal of nuclear materials or other hazardous radioactive substances which causes or is likely

²²⁶ ECD, recital 3.

²²⁷ ECD, recital 5.

²²⁸ ECD, recital 11.

²²⁹ ECD, art 3.

to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;

(f) the killing, destruction, possession or taking of specimens of protected wild fauna or flora species, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation status of the species;

(g) trading in specimens of protected wild fauna or flora species or parts or derivatives thereof, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation status of the species;

(h) any conduct which causes the significant deterioration of a habitat within a protected site;

(i) the production, importation, exportation, placing on the market or use of ozone-depleting substances.

Under art 4, inciting, aiding and abetting that conduct is a criminal offence.²³⁰ This may be useful in the context of a global value chain. Those operators higher up the chain may not be engaged directly in the unlawful conduct but might benefit financially from it through, for example, lower priced goods or services. The potential for them to be subject to criminal liability for inciting, aiding and abetting unlawful conduct further down the chain may have a deterrent effect.

For the purpose of the ECD, the term 'unlawful' is deemed to mean *infringing*,²³¹

- i. EC legislation listed in Annex A (examples of which are listed above); or
- ii. EC legislation adopted pursuant to the Euratom Treaty and listed in Annex B; or
- iii. domestic law that gives effect to (i) or (ii).

The ECD is explicitly clear Member States must ensure that 'legal persons' (e.g. corporations and limited liability partnerships) can be held liable for offences referred to in arts 3 and 4,²³²

where such offences have been committed for *their benefit* by any person who has a *leading position* within the legal person, acting either individually or as part of an organ of the legal person, based on: (a) a *power of representation* of the legal person; (b) an *authority to take decisions* on behalf of the legal person; or (c) an *authority to exercise control* within the legal person.

Member States shall also ensure that legal persons can be held liable where the 'lack of supervision or control', by the person is a 'leading position' within it 'has made possible the commission of an offence for the benefit of the legal person by a person under its authority'.²³³ The liability of legal persons does not exclude criminal proceedings against natural persons who are perpetrators, inciters or accessories of the relevant offences.²³⁴ This could, of course, cover directors or other corporate officers or managers of the company.

²³⁰ ECD, art 4.

²³¹ ECD, art 2(a).

²³² ECD, art 6(1).

²³³ ECD, art 6(2).

²³⁴ ECD, art 6.

7. Case Study: A Civil Liability-Focused Legal Framework - the ‘Vigilance Law’ of France

As we have seen, in the absence of an extraterritorial regime, MNEs may use different legal systems strategically to their advantage and select those countries with weak governance systems as suitable bases from which to operate.²³⁵ To deter this behaviour and prevent tortious activities conducted by MNEs, a legal framework may be implemented with a nation’s domestic laws to hold parent companies accountable for a breach of a due diligence obligation.²³⁶ French law, specifically, Law No 2017-399 of 27 March 2017 on the corporate duty of vigilance for parent and instructing companies (the “Vigilance Law”),²³⁷ provides a useful example of such a framework. It is heralded as ‘one of the most advanced domestic regimes with respect to mandated human rights due diligence.’²³⁸ Moreover, it is the only legislative example, to date, which imposes a general mandatory due diligence requirement for human rights and environmental impacts.²³⁹ The framework shares commonalities with the human rights due diligence process provided by the UNGPs and associated standards,²⁴⁰ and its interpretation is likely to be influenced by them. Reference to such higher norms by the courts in determining purported breaches of the obligations enacted by the law provides a powerful means of enabling jurisdictions to be creative in the development of national law, yet, at the same time, ensure a degree of commonality in the interpretation of key concepts (e.g. severity of impact).

7.1. Scope of the Vigilance Law

[Note: the English translation of the Vigilance Law used in this Report is that provided by Elsa Savourey, in the ‘France Country Report’ in Lise Smit et al, ‘Study on Due Diligence Requirements Through the Supply Chain, Part III: Country Reports’ (January 2020)]

The Vigilance Law provisions were inserted in two new articles of the French Commercial Code (*Code de commerce*) (article L. 225-102-4 and L. 225-102-5). Under article L. 225-102-4.-I., any company that employs, by the end of two consecutive financial years (*deux exercices consécutifs*), at least five thousand employees (*salaries*) itself and in its direct or indirect subsidiaries whose registered office (*siège social*) is located within the French territory, or at least ten thousand employees itself and in its direct or indirect subsidiaries whose registered office is located within the French territory or abroad, shall ‘establish and effectively implement’ a vigilance plan. Under article L. 225-102-4.-I para. 3, the plan is to contain reasonable vigilance measures (*mesures de vigilance raisonnable*) adequate to identify risks and to prevent ‘severe impacts’ (*atteintes graves*) on human rights and fundamental freedoms, on the health and safety of persons and on the environment, resulting from the activities of the company and of those companies it controls, directly or indirectly, as well as the activities of subcontractors or suppliers (*sous-traitants ou fournisseurs*) ‘with whom there is an established commercial relationship’, when these activities are related to this relationship. The plan need not include remedies to be put into action once human rights abuses or severe environmental impacts have occurred.²⁴¹ Whilst the absence of this requirement does not conflict directly with Principle 22 of the UNGPs (‘[w]here business enterprises identify that they have caused or contributed to adverse impacts, they should provide for or cooperate in their remediation through legitimate processes’) it does not comfortably with its spirit.

The Vigilance Law neither defines ‘severe impacts’ nor the ‘environment’ and so cannot inform how ‘adverse environmental impact’ could be defined under an EU due diligence law. In the context of the Vigilance Law, these are likely to be clarified by the courts in the years to come. It remains to be seen

²³⁵ Palombo (n 4) 267.

²³⁶ *ibid* 269.

²³⁷ *Loi No 2017-399 du 27 mars 2017 relative au devoir de vigilance des sociétés mères et des entreprises donneuses d'ordre.*

²³⁸ Savourey, ‘France Country Report’ (n 10) 88

²³⁹ Smit et al (n 11) 169.

²⁴⁰ Savourey, ‘France Country Report’ (n 10) 56.

²⁴¹ Savourey, ‘France Country Report’ (n 10) 71.

whether these will be construed broadly or narrowly. On this point, Savourey notes that during parliamentary debates, it was decided that there was no need for further clarification of key terms, such as these, as France had committed to sufficiently precise and comprehensive international obligations.²⁴² On this point, the UNGPs and *OECD Guidelines for Multinational Enterprises* are deemed to ‘source of inspiration’ for interpreting the Vigilance Law.²⁴³ The logic appears to be that international obligations, such as these, would ‘fill any gaps’ in the Vigilance Law’s interpretation.

Thus, to summarise, Vigilance Law imposes three obligations (the “Vigilance Obligations”) upon companies caught by the reach of the legislation:

- Establish a vigilance plan.
- Effectively implement that plan; and
- Make the plan and the report on its effective implementation public and include them in the company’s annual management report.

It is also important to note that there is no official body/regulator in charge of monitoring the implementation of the Vigilance Law.²⁴⁴ The system relies on NGOs to scrutinise vigilance plans and, if appropriate, seek a remedy.

7.2. Remedies under the Vigilance Law

The obligations created under the Vigilance law and, in turn, the prospect of incurring the sanctions enacted under it, will only apply to French-incorporated companies.²⁴⁵ There are two principal remedies available under the Vigilance law: injunction and civil liability. As regards the injunction, which can be brought by any party with standing (e.g. NGOs, trade unions), there is the potential for a periodic penalty payment. Under article L. 225-102-4.-II, if a company has failed to comply with its Vigilance Obligations, first, it is given a three months’ official notice (*mise en demeure*) to comply, then the party can ask the competent court to order the company to comply, including under periodic penalty payment.

As regards a civil liability action, under art. 225-102-5, the Vigilance Law provides that companies failing to comply with the Vigilance Obligations must remedy the damage that ‘the execution of these obligations could have prevented’. Any damage occurring outside the ambit of the plan (e.g. damage caused by a supplier with whom there was no established commercial relationship) will not be covered by the framework of civil liability envisioned by the Vigilance Law. It is also essential to note that the Vigilance Law’s civil liability regime is based on the parent or instructing company’s *own* fault, i.e. *its* breach of the Vigilance Obligations, not the fault of other entities – subsidiaries or other affiliates – in the supply chain.²⁴⁶ This is a subtle but important point.

The Vigilance Law explicitly refers to articles 1240 and 1241 of the Civil Code which set the conditions for civil liability under the general law of torts, specifically existence of: (1) damage; a (2) breach of/failure to comply with an obligation; and (3) a causal link between the damage (i.e. arising from the severe environmental impact) and the breach (i.e. failure to comply with the Vigilance Obligations).²⁴⁷ The claimant bringing the civil liability action bears the burden of proof.²⁴⁸ Establishing causation in circumstances where there are long and complex supply chains, with numerous actors located in different legal jurisdictions may be problematic. And collating evidence may be difficult (and costly) when claimants are located outside of France. As detailed in Section 2.2.2.3 of this Report, the CJEU caselaw relating to the establishment of causation under the ELD, and the prospect of a *rebuttable presumption* of causation when certain conditions are satisfied, may ease the evidentiary burden. There is also the very basic observation that the claimants (and their advisors) located abroad must know: (1) about the reach of the

²⁴² *ibid* 62-63.

²⁴³ *ibid* 65.

²⁴⁴ *Ibid* 71.

²⁴⁵ Brabant and Savourey (n 23) 2.

²⁴⁶ Savourey, ‘France Country Report’ (n 10) 68.

²⁴⁷ *ibid*.

²⁴⁸ *ibid*.

Vigilance law; and (2) that the entity that caused the severe environmental impact falls under its scope. There is also the concern that ‘material, social, institutional and linguistic circumstances’ may render it all the more difficult to bring a legal action before the French courts.²⁴⁹

Savourey makes the important observation that the obligation to effectively implement a vigilance plan was introduced to ensure that companies ‘take all steps in their power to reach a certain result [*obligation de moyens*] rather than to guarantee the actual attainment of that result [*obligation de résultat*]. As a result, a breach of that obligation cannot be inferred *merely because there is damage*.’²⁵⁰ There is also, it seems, the possibility of a defendant arguing (successfully) that a properly established and implemented vigilance plan ought to alleviate them from liability under the regime.²⁵¹

It is important to note that the civil fine provided for in the final draft of the law as adopted by Parliament (a maximum of 10 million of euros for failure to comply with the Vigilance Obligations, and 30 million of euros in the event of a damage resulting from that failure) was found unconstitutional by the French Constitutional Court.²⁵² The reason for the decision was that the fine was akin to a criminal penalty but was one which was not defined in a sufficiently clear and precise manner as per the constitutional requirements for criminal offences and penalties under French law.²⁵³ Nevertheless, the definition remains a condition for a finding of civil liability.

The ability of NGOs and trade unions to bring class actions for remediation in a civil court for damage incurred by third parties or by their own members is quite limited as under French law, only the victim has standing to bring a civil liability action.²⁵⁴

Whilst an objective of the Vigilance Law was to offer victims located outside of France a right to compensation from French parent/instructing companies, ‘it is, in practice, particularly complex for a foreign victim to gain access to the French courts.’²⁵⁵ There appears to be some uncertainty as to whether the Vigilance Law applies in the event of damage occurring abroad.²⁵⁶ If article 4²⁵⁷ of Rome II Regulation applies – and there is some consternation as to whether it does – the law of the country in which the damage occurred would be applicable.²⁵⁸ This may be highly detrimental to a claimant.

From the perspective of presumed economic rationality, successful ascription of civil liability to the parent could reduce environmental risk, this being defined as the probability that the activities of its subsidiaries or pertinent contractors and/or suppliers, will cause severe environmental impacts.²⁵⁹ As the parent would be aware that they could be found liable, they would look to reduce this risk. In the context of the risks created by its subsidiaries, the parent would, for example, be incentivised to invest in safety and ensure that others in the value chain did the same.²⁶⁰ The threat of liability and the reputational damage that may flow from a finding of liability, therefore, could motivate parent companies to modify the behaviour of their subsidiaries and those in its value chain. Thus, in a similar fashion to other legal frameworks that impose financial liability upon a responsible person, there is a powerful *preventive* potential created by this threat.

²⁴⁹ Brabant and Savourey (n 23) 3.

²⁵⁰ Savourey, ‘France Country Report’ (n 10) 68.

²⁵¹ *ibid* 87-88.

²⁵² *ibid* 71.

²⁵³ *ibid* 71.

²⁵⁴ *ibid* 74.

²⁵⁵ Brabant and Savourey (n 23) 3.

²⁵⁶ Savourey, ‘France Country Report’ (n 10) 75.

²⁵⁷ Rome II, art 4: ‘[u]nless otherwise provided for in this Regulation, the law applicable to a non-contractual obligation arising out of a tort/delict shall be the law of the country in which the damage occurs irrespective of the country in which the event giving rise to the damage occurred and irrespective of the country or countries in which the indirect consequences of that event occur.’

²⁵⁸ Savourey, ‘France Country Report’ (n 10) 75.

²⁵⁹ Mackie, ‘The Regulatory Potential of Financial Security’ (n 158) 193.

²⁶⁰ *Ibid*.

8. The Scope of Liability under the Regime

This section will consider whether it is prudent to distinguish between pure ecological damage (e.g. 'environmental damage' as understood under the EU Environmental Liability Directive) and traditional damage (e.g. damage to property, economic loss, personal injury) for the purposes of formulating a framework of liability to address environmental harm arising from breach of the due diligence duty. That liability would arise where they caused or contributed to environmental harm. We have seen how the ELD, and caselaw from the CJEU, can help inform understanding of what the phrase 'caused or contributed to' under the UNGPs.

A crucial question in the context of the proposed scope of the liability regime attached to the due diligence duty was whether liability should attach for the purpose of: (1) pure ecological damage alone; (2) traditional damage alone; or (3) pure ecological damage *and* traditional damage. We can, of course, point to frameworks of environmental liability that can be placed in each of these two categories. The EU Environmental Liability Directive is the classic example of framework which creates liability for pure ecological damage only. The Vigilance Law of France provides a ready example of a civil liability regime only. The following Conventions provide examples of mixed frameworks:

- International Convention on Civil Liability for Oil Pollution Damage, 1992
- International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001, and
- International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 2010 (HNS Convention).

For example, under art 1(6) of the 2010 HNS Convention, the term 'damage' means:

- (a) *loss of life or personal injury* on board or outside the ship carrying the hazardous and noxious substances caused by those substances;
- (b) *loss of or damage to property* outside the ship carrying the hazardous and noxious substances caused by those substances;
- (c) *loss or damage* by contamination of the environment caused by the hazardous and noxious substances, *provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken*; and
- (d) the costs of preventive measures and further loss or damage caused by preventive measures.

Art 1(6)(a) covers personal injury, art 1(6)(b) damage to property and art 1(6)(c) economic loss and pure ecological damage. Indeed, the latter provision does so in a subtle, indirect manner and does not emphasise the distinction between the two heads of liability.

To be clear, the term 'traditional damage' covers damage caused to *persons* as victims resulting from an activity and may include damage to their property, bodily injury (including loss of life) and economic loss suffered by them.²⁶¹ **It is essential to observe that the damages (i.e. monetary sums) paid by operators to claimants in respect of successful claims under this head of liability do not normally need to be used to correct the environmental damage caused, limit its impacts, or prevent further damage.** The costs deriving from the pollution will then be transferred (i.e. 'externalised') to wider society, contrary to the policy driving the polluter-pays principle under EU law.

In contrast 'pure ecological damage' concerns the environment *as such* and does not require any person to have suffered damage or losses.²⁶² This, which is deemed the most significant innovation of the ELD,²⁶³ would not cover additional damage to a person's property. Indeed, recital 14 makes it clear that the ELD does not apply to 'traditional damage' i.e. cases of personal injury, to damage to private property or to any

²⁶¹ SWD(2016) 121 final, COMMISSION STAFF WORKING DOCUMENT REFIT Evaluation of the Environmental Liability Directive, 12-13.

²⁶² *ibid* 13.

²⁶³ Winter et al (n 56) 168.

economic loss.²⁶⁴ Civil law remedies, available under national law (e.g. claims in tort or nuisance), would, instead, have to be relied upon by claimants. But this would occur *outside* of the scope of the ELD. Despite leaving the recompense of traditional damage to domestic private law, the ELD requires operators to bear environmental costs which they had not previously been obligated to. **Under traditional civil claims, such as tort, generally, a polluter need only bear the costs of private damage such as personal injury, damage to private property or economic loss. They will not normally be held financially liable for damage to the environment as such.** Where this occurs, the damages payable do not reflect the true harm done.²⁶⁵ The ELD, of course, defines environmental damage so as to include damage to natural resources, even where they are not in private ownership. For this reason, the ELD provides a more comprehensive means of assessing the true environmental costs associated with an activity than permitted under traditional civil law actions.²⁶⁶

It is essential to recognise that inclusion of traditional damage under what became the EU Environmental Liability Directive was politically contentious. As Winter et al contend, '[t]he logic for the final choices that were made as to its scope and structure can only be explained by the demands of *political compromise* rather than environmental needs.'²⁶⁷ Part of the reason for this tension was that Member States wanted their own national system of tort law, built up and shaped by jurisprudence over decades and even centuries, to remain untouched.²⁶⁸ And differences between the approaches of common law and civil law jurisdictions within the EC compounded the ability to achieve a common approach.²⁶⁹ Winter et al suggest that '[a]s Member States had, for obvious reasons, no objection to the proposal's limited field of application, the Commission's approach was followed, despite some attempts by the European Parliament to have traditional damage re-instated in the Directive.'²⁷⁰ It appears that the Commission even considered deleting the word 'liability' from the title of the proposal but decided against this due to perceived '*political attractiveness* of the notion of 'environmental liability'.²⁷¹

These issues aside, it is appealing for a variety of venerable policy reasons to introduce a mixed regime under the new mandatory due diligence law. A series of cases of claimants from outside of the EU being permitted to bring actions against EU-based defendants, such as UK-based parents of subsidiaries located in developing countries, suggests that the tide may be turning in favour of such a regime.²⁷² Indeed, it may be said that there is now a compelling basis for one.

9. Strict Liability

This section will examine the type of damage that leads to strict liability under EU law and the circumstances in which that liability will arise. The ELD is ripe for analysis on this point owing to its role as a *framework* Directive in the sense that it establishes liability for damage arising from activities governed by other Directives, including the Waste Framework Directive and the Directive on the geological storage of carbon dioxide. It comprises two distinct liability regimes governing the activities of "operators", i.e. the persons with primary responsibility for the environmental damage:²⁷³

²⁶⁴ ELD, recital fourteen.

²⁶⁵ Maria Lee, 'Tort, regulation and environmental liability' (2002) 22 LS 1 33, 43.

²⁶⁶ *ibid.*

²⁶⁷ Winter et al (n 56) 191 (emphasis added).

²⁶⁸ *ibid* 165

²⁶⁹ *ibid.*

²⁷⁰ *ibid.*

²⁷¹ *ibid* (emphasis added).

²⁷² For instance, see the clarification provided by the UK Supreme Court in *Vedanta Resources PLC v Lungowe* [2019] UKSC 20 where England was held to be the proper place in which to bring a claim against *both* a UK-domiciled parent company and its Zambian subsidiary, for environmental damage caused in Zambia.

²⁷³ The 'operator' is defined under the ELD as 'any natural or legal, private or public person who operates or controls the occupational activity or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of such an activity has been delegated, including the holder of a permit or authorisation for such an activity or the person registering or notifying such an activity': ELD, art 2(6).

1. **Strict liability:** this applies to damage to protected species and natural habitats, water, and land caused by any of the occupational activities listed in Annex III of the ELD, and to any imminent threat of such damage occurring by reason of any of those activities.²⁷⁴ A full list of these environmentally risky activities is provided in the Appendix to this report. However, for illustrative purposes, they include:
 - waste management operations.
 - water abstraction and impoundment.
 - manufacture, use, storage, processing, filling, release into the environment and onsite transport of dangerous substances, dangerous preparations, plant protection products and biocidal products.
 - transport by road, rail, inland waterways, sea or air of dangerous or polluting goods.
 - any deliberate release into the environment, transport and placing on the market of genetically modified organisms.
 - transboundary shipment of waste within, into or out of the European Union.
 - management of extractive waste.
 - geological storage of carbon dioxide.
2. **Fault-based:** this applies to damage to protected species and natural habitats caused by any occupational activities *other than those listed in Annex III* (i.e. non-listed activities), and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at *fault or negligent*.²⁷⁵ Importantly, it does not apply to damage to land or water.

10. Exceptions, Exclusions and Defences to Liability

This section will examine pertinent exceptions, exclusions and defences to liability for environmental damage or environmental crime. Whilst it will focus on the ELD and the ECD, it will draw on other examples in relation to a 'due diligence' defence.

10.1. The Environmental Liability Directive

There are a broad range of exceptions and defences available under the ELD. For example, article 4 asserts that the ELD does *not* apply to:

- environmental damage or any imminent threat of such damage arising from an incident in respect of which liability or compensation falls within the scope of a range of specified International Conventions which are in force in the Member State concerned.
- nuclear risks or environmental damage or imminent threat of such damage as may be caused by the activities covered by the Treaty establishing the European Atomic Energy Community or caused by an incident or activity in respect of which liability or compensation falls within the scope of any of the international instruments listed in Annex V.
- environmental damage or to an imminent threat of such damage caused by pollution of a diffuse character, *where it is not possible to establish a causal link between the damage and the activities of individual operators*. Of course, where such a link can be established the ELD will apply to such damage. Diffuse pollution is, generally, understood to encompass, '[p]ollution from widespread

²⁷⁴ ELD, art 3(1)(a).

²⁷⁵ ELD, art3(1)(a).

activities with no one discrete source'.²⁷⁶ Whilst pollution from individual diffuse sources may not be of particular concern at the individual level, in combination they have a significant environmental impact.²⁷⁷

- activities the main purpose of which is to serve national defence or international security nor to activities the sole purpose of which is to protect from natural disasters.

Articles 4 also makes clear that the ELD does not cover environmental damage or an imminent threat of such damage caused by: (a) an act of armed conflict, hostilities, civil war or insurrection; (b) a natural phenomenon of exceptional, inevitable and irresistible character.

Where the competent authority has taken preventive and/or remedial measures, it may initiate cost recovery proceedings against the operator or third party who has caused the damage or the imminent threat of such damage.²⁷⁸ Article 8 details circumstances under which an operator is not required to bear the cost of preventive or remedial actions. Under art 8(3), an operator is not required to bear the cost of preventive or remedial actions when he can prove that the environmental damage or imminent threat of such damage:

(a) was caused by a third party and occurred despite the fact that appropriate safety measures were in place; or

(b) resulted from compliance with a compulsory order or instruction emanating from a public authority other than an order or instruction consequent upon an emission or incident caused by the operator's own activities.

Betlem questions the ultimate utility of these defences for operators given that they do not protect them from liability but merely provide for the prospect of contribution.²⁷⁹ The third-party defence is limited further by the fact that where the third party cannot be identified or is insolvent, the operator will bear the costs.²⁸⁰ Thus, a distinction must be made under the ELD between the liability of the operator and their responsibility to bear the costs.²⁸¹ An operator may not have caused environmental damage or the imminent threat of it, and so may not be deemed to be liable under the ELD. However, it can be held responsible financially for the ELD-related costs of a third party.

There are two further *optional* defences that Member States may decide to introduce under their national laws implementing the requirements of the ELD. First, under art 8(4)(a), Member States may allow the operator not to bear the cost of remedial actions where the operator can demonstrate that they were not at fault or negligent *and* the environmental damage was caused by an emission or event expressly authorised by their Annex III activity permit. This is the so-called 'permit defence'. Successful invocation of the defence does not mean that the operator is no longer responsible for the damage; they remain the 'polluter'. They are just not *liable* for the associated remediation costs, i.e. they do not have to 'pay'. The defence provides an avenue through which an operator may recover from the State the costs it has *incurred* in carrying out remedial measures. However, through excluding liability for pollution caused by emissions in accordance with a permit, the ELD is seen to fail to encourage polluters to reduce harm caused by emissions below the limits set by the permit.²⁸² However, the benefit accorded by the permit defence to operators is seen to be 'more illusory than real'.²⁸³ Fogleman believes that it is 'likely to apply only to pollution that has occurred over a long period of time if, as is rarely the case, an operator has not

²⁷⁶ European Environment Agency, 'Glossary definitions: diffuse pollution' (*European Environment Agency*, undated) <<https://www.eea.europa.eu/archived/archived-content-water-topic/wise-help-centre/glossary-definitions/diffuse-pollution>>.

²⁷⁷ *ibid.*

²⁷⁸ ELD, art 10.

²⁷⁹ Gerrit Betlem, 'Transnational Operator Liability' in Gerrit Betlem and Edward Brans (eds), *Environmental Liability in the EU* (Cameron May 2006) 149-188, 183.

²⁸⁰ *ibid* 174-5.

²⁸¹ *ibid* 181.

²⁸² Valerie Fogleman, 'Polluter pays principle for accidental environmental damage' (n 33) 141.

²⁸³ *ibid* 142.

exceeded a single emission limit value in its permit over that period'.²⁸⁴ If a sudden emission to, for example, water causes 'environmental damage' for the purposes of the ELD, it is likely that the permit will have been breached. The defence, therefore, will be rendered inapplicable. And, often, emissions to water in excess of the permit limits will be intentional, meaning that there is the argument that the operator was at fault and/or negligent.

Second, under article 8(4)(b), Member States may allow the operator not to bear the cost of remedial actions taken pursuant to this Directive where he demonstrates that he was not at fault or negligent and that the environmental damage was caused by an emission or activity or any manner of using a product in the course of an activity which the operator demonstrates *was not considered likely to cause environmental damage according to the state of scientific and technical knowledge at the time when the emission was released or the activity took place*. This is known as the 'state of the art' defence. It, therefore, excludes 'unforeseeable' damage from liability, and is presumably intended to protect industry innovation.²⁸⁵ This does, however, conflict with the policy driving the precautionary principle and would inhibit the recommendations made about in relation to how that principle might inform the interpretation given to 'adverse environmental impact' (or, as is recommended, environmental harm).

10.2. Environmental Crimes Directive

It will be recalled that the ECD is explicitly clear Member States must ensure that legal persons, such as corporations and limited liability partnerships (LLPs), can be held liable for the offences referred to in the Directive. However, for a company to be prosecuted the offence must have been committed for its '*benefit*' by any person who has a '*leading position*' within the legal person, acting either individually or as part of an organ of the legal person [e.g. the board of directors], based on: (a) a power of representation of the legal person; (b) an authority to take decisions on behalf of the legal person; or (c) an authority to exercise control within the legal person.'²⁸⁶ A simple means for a company to avoid prosecution would be to ensure that any criminally unlawful activity was committed by individuals who did not occupy a leading position in the organisation, shielding leading persons from any pertinent knowledge of such offences. That said, the ECD is clear that Member States shall also ensure that legal persons can be held liable where the 'lack of supervision or control', by the person is a 'leading position' within it person 'has made possible the commission of an offence for the benefit of the legal person by a person under its authority'.²⁸⁷ There is, thus, the possibility for any attempt to shield a senior figure from knowledge of the offence in order to avoid them being prosecuted to be discounted where that person should have been exercising greater supervision or control over the unlawful activity. Put more simply, it is not sufficient to close your eyes and ears in an attempt to avoid the company being deemed to have committed an offence. The difficult question will be around the requisite degree of supervision and control over operations that will suffice to result in the company being found to commit an offence.

10.3. Due Diligence Defence

Under s 493(A)(3) of the *Environmental Protection Act 1994* (Qld), it is a defence to a charge of 'unlawfully' doing a relevant act to prove – (a) the relevant act was done while carrying out an activity that is lawful *apart from this Act*; and (b) the defendant *complied with the general environmental duty*. It will be recalled that under s 319(1) of the EP Act, that duty requires that '[a] person must not carry out any activity that causes, or is likely to cause, environmental harm *unless the person takes all reasonable and practicable measures to prevent or minimise the harm*'. The importance of this type of defence was recognised amongst stakeholders consulted by a project team which produced a large report for the European Commission in January 2020. This consultation found that '[t]here was an understanding amongst stakeholders that a company should be able to defend itself against legal liability when it could show that it has undertaken

²⁸⁴ *ibid* 142.

²⁸⁵ Lee, 'New Environmental Liabilities' (n 31) 273.

²⁸⁶ ECD, art 6(1).

²⁸⁷ ECD, art 6(2).

the due diligence required in the circumstances (the *due diligence defence*).²⁸⁸ Indeed, such a defence is found in Italian Legislative Decree 231/2001 which allows for a defence against corporate liability in respect of certain criminal offences if the company can demonstrate that it adopted 'models of organisation, management and control' in order to identify, prevent and mitigate the risk of commission of certain human rights and environmental violations.²⁸⁹

11. The Liability of Directors for Environmental Damage/Harm

There are a variety of frameworks of environmental liability under which directors could, potentially, be held liable for environmental damage/harm. As we have seen, under art 3 of the ECD, a natural person may be deemed to commit a criminal offence when their conduct is unlawful and committed intentionally or with at least serious negligence. And, in theory, a director could be liable under the ELD where they are found to be an 'operator' of the activity which caused environmental damage or the imminent threat of such damage. They must be the person who 'operates or controls the occupational activity or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of such an activity has been delegated...or the person registering or notifying such an activity.'²⁹⁰ Article 13(2) of the Environmental Liability Act, which implements the requirements of the ELD in into the law of Spain, provides that legal and *de facto* managers of companies whose conduct is the determining factor of the company's liability may be found to be secondarily liable for preventing or remediating environmental damage caused by the company.²⁹¹

There are precedents under Irish law for holding directors (and, potentially through analogy, other corporate officers, and pertinent individuals, such as senior managers) personally liable for environmental damage committed by the companies whom they serve. The High Court of Ireland has considered this potential explicitly in a series of decisions, three of which will now be examined. In *Wicklow CC v Fenton*,²⁹² the High Court of Ireland was required to interpret certain liability imposing provisions under the Irish Waste Management Act 1996 (the 'WMA 1996'). The court had to determine, *inter alia*, whether two directors could be found personally liable for environmental pollution associated with the illegal dumping of waste by a company. The WMA 1996 transposed various EU directives in respect of the prevention, management and control of waste. The case concerned ss 57 and 58 WMA 1996 which, *inter alia*, permitted the court to make an order that a person 'holding, recovering or disposing of waste' mitigate or remedy any effects of environmental pollution caused by the waste. Under s 57(1)(c), the court is also permitted to make an order for costs. Two of the defendants were directors of a waste collection company which had illegally dumped waste. One supervised the operations at the site from which the waste was collected and the other was the company's bookkeeper. Interpreting the relevant provisions so to permit a 'fall-back' order to be made against the individual directors, O'Sullivan J believed that the 'full' application of the polluter-pays principle meant that 'those *responsible even indirectly* for causing environmental pollution should pay for it rather than leave it to an innocent party or the community to do so'.²⁹³

In *Environmental Protection Agency v Neiphin Trading Ltd*,²⁹⁴ the High Court of Ireland was again required to determine whether a 'fall-back' order could be made against individual directors and/or shareholders of a corporate entity under the provisions of the WMA 1996. The court, however, reached a very decision than in *Fenton*. Edwards J agreed with O'Sullivan J's reasoning in *Fenton* as to the requirements of a 'full'

²⁸⁸ Smit et al (n 11) 18.

²⁸⁹ *ibid* 30. See FIDH, HRIC and ECCJ, 'Italian Legislative Decree No. 231/2001: A model for Mandatory Human Rights Due Diligence Legislations?' (November 2019) 10 <https://e6e968f2-1ede-4808-acd7-cc626067cbc4.filesusr.com/ugd/6c779a_d800c52c15444d74a4ee398a3472f64c.pdf>.

²⁹⁰ ELD, art 2(6).

²⁹¹ Valerie Fogleman, *Improving Financial Security in the Context of the Environmental Liability Directive*, No 07.0203/2018/789239/SER/ENV.E.4 (May 2020), 232 <https://ec.europa.eu/environment/legal/liability/pdf/Final_report.pdf>.

²⁹² [2002] IEHC 102.

²⁹³ *ibid* para 115 (O'Sullivan J).

²⁹⁴ [2011] IEHC 67.

application of the polluter-pays principle.²⁹⁵ However, he did not believe that ss 57 and 58 were ‘capable of being construed so as to confer a blanket jurisdiction on the High Court to make “fall-back” orders against individual directors and/or shareholders where a company cannot (as opposed to will not) comply with a primary Order.’²⁹⁶ He believed the extent to which the polluter-pays principle had been incorporated into domestic law to be ‘fairly limited’ given that there were very few references to it within the WMA 1996.²⁹⁷ s 5 WMA 1996 did not actually incorporate the principle into domestic law but merely defined it in terms that under the WMA 1996, the principle was as set out in the 1975 Council Recommendation. He believed that if the legislature had intended to apply the principle, as defined in s 5 to ss 57 and 58, ‘one might have expected to see references to that principle in the wording of those provisions.’²⁹⁸ He noted that there were no such references.

In *John Ronan & Sons v Clean Build Ltd*²⁹⁹ the High Court of Ireland court took a different approach to that in *Fenton and Neiphin Trading*. The case concerned a site which required remediation to remove waste deposited at the site. The lessee of the site, Clean Build, had been dissolved and no longer existed. The landowner, therefore, sought to render liable, *inter alia*, the lessee’s former directors under ss 57 and 58 WMA 1996. As we have seen, an order may be made against the person ‘holding’ waste. Under s 5 WMA 1996, ‘holder’ means, ‘the owner, person in charge, or any other person having, for the time being, possession or control, of the waste’ whilst “person in charge” in relation to any premises, is defined, *inter alia*, as ‘a manager, supervisor or operator of an activity relating to the holding, disposal or recovery of waste which is carried on at the premises.’³⁰⁰

In finding all but one of the former directors to be a ‘holder’ of waste, Clarke J held, following his reasoning in *Cork CC v O’Regan*,³⁰¹ that ‘[t]he fact that the business may be conducted by a corporate entity does not prevent individuals (whether they be directors, shareholders or otherwise) from being managers, supervisors or operators.’³⁰² With the exception of one director whose only real involvement in the operation was at a junior level, the other directors had significant personal supervisory roles over the operations being carried out.³⁰³ Whilst they were not on the site full-time, they observed what was going on and made the relevant policy decisions and directions as to how activities were to be carried on.³⁰⁴ The court held that they were ‘directly and personally involved’ in the waste operation and thus should ‘bear responsibility, to an appropriate extent having regard to the activities which occurred during their watch, for the current consequences of those actions.’³⁰⁵ The court thus found the former directors to be *independently* liable under the WMA 1996 and so was not required to establish whether a fall back order need be made. This approach permitted the court to distinguish *Fenton and Neiphin Trading*. Indeed, the reasoning in *Neiphin Trading* did not apply to circumstances where a director or shareholder was found to be ‘independently liable’ under the WMA 1996.³⁰⁶

The decisions in *Fenton, Neiphin Trading* and *Clean Build* illustrate the differing approaches which the same court adopted to the interpretation of substantively similar domestic legislation which transposes the provisions of EU directives. In *Fenton*, utilising a teleological interpretive approach, O’Sullivan J applied the objectives of the relevant directives through his interpretation of domestic law. In *Clean Build*, Clarke J adopted an interpretation of the legislation which permitted him to find individual directors and shareholders liable where they met the definition of “holder” of waste. Making relevant policy decisions and giving directions as to how activities were to be carried out reflected their direct involvement for the ensuing environmental damage. However, the future utility of a *Clean Build* approach, i.e. interpreting

²⁹⁵ *ibid* para 6.43.

²⁹⁶ *ibid* para 6.47.

²⁹⁷ *ibid* para 6.48.

²⁹⁸ *ibid* para 6.49.

²⁹⁹ [2011] IEHC 350.

³⁰⁰ WMA 1996 (as amended), s 5. Whilst the definition of ‘holder’ under s 5 WMA 1996 was amended by Article 19 of the Waste Management (Registration of Brokers and Dealers) Regulations 2008, the court held that this did not affect the outcome: *Clean Build* (n 61) para 10.9 (Clarke J).

³⁰¹ [2009] 3 IR 39.

³⁰² *ibid* para 7.1 (Clarke J).

³⁰³ *ibid* para 7.2.

³⁰⁴ *ibid*.

³⁰⁵ *ibid* para 7.3.

³⁰⁶ *ibid* para 6.18.

legislation to capture pertinent individuals, requires the legislation to cater for the prospect of natural persons being caught by the wording of the relevant provisions. For example, under s 5 WMA 1996, the term 'holder' caught the 'person in charge'. This was clearly drafted to capture relevant individuals. Other legislative frameworks might not be so explicitly facilitative of this.

In contrast, in *Neiphin Trading*, Edwards J was less facilitative of the aims of EU environmental law. Instead he sought to construe domestic law in a more traditional manner through a literal approach. Thus, the protection afforded by corporate law was accorded priority over the prevention and control of pollution. He did not interpret domestic legislation to further the purpose of the directive. An important point of policy seemingly drove his decision. Edwards J appeared to be concerned that the reasoning of O'Sullivan J would, in effect, result in a wholesale disregard of the benefits of the corporate form, including separate legal personality. This principle of corporate law states that once a company is incorporated, it becomes a legal person distinct from its shareholders with rights and liabilities of its own. On this basis, the company would usually be the 'person' upon whom liability attached for the harmful actions caused by its operations, not the directors or the shareholders.

O'Sullivan J's application of the polluter-pays principle to impose liability in accordance with responsibility, direct or indirect, may be welcomed by many, particularly where the company was insolvent and unable to bear liability. His logic does fit with the broader jurisprudence of EU environmental law. Under the 1975 Council Recommendation, a polluter was someone 'who directly or indirectly damages the environment or who creates conditions leading to such damage.'³⁰⁷ This may be viewed as akin to the idea of causing or contributing to an adverse impact. In *Raffinerie Mediterranee (ERG) SpA v Ministero dello Sviluppo Economico*, AG Kokott held that under Art 2(6), the operator is the person who is 'responsible for the activity which has caused the damage.'³⁰⁸ Whilst in *R v Secretary of State for the Environment ex p Standley*, AG Léger held that the polluter-pays principle meant that the person 'responsible' for the harmful effects was required to 'make good or bear the cost of that harm.'³⁰⁹ If liability is attributed to those responsible for decisions which led to environmental damage, as opposed to upon the basis of strict company law doctrine, then this may prevent corporations from avoiding financial liability for environmental damage/harm.

In ruling KKO 2016:58, the Supreme Court of Finland has also considered the issue of director liability for environmental damage. The case possesses precedent value due to the lack of such decisions in Finnish courts.³¹⁰ The question for the court was whether members of the board of directors could be found liable for environmental degradation by neglecting their obligations as board members. Thus, it was a case of attempted attribution of liability for *omission*. The court held that the failure of two board members (of a three-person board) to familiarize themselves with the content of an environmental permit amounted to gross negligence. Furthermore, the court found that they had deliberately neglected their duty to arrange and supervise matters related to the permit.

³⁰⁷ Council Recommendation 75/436/Euratom, ECSC, EEC of 3 March 1975 regarding cost allocation and action by public authorities on environmental matters [1975] OJ L194/1 [3] (emphasis added).

³⁰⁸ C-379/08 *Raffinerie Mediterranee (ERG) SpA v Ministero dello Sviluppo Economico* [2010] Env LR 39, Opinion of AG Kokott, para 87.

³⁰⁹ Case C-293/97 [1999] ECR I-2603, Opinion of AG Léger, para 96.

³¹⁰ Lia Heasman, 'Finland Country Report' in Lise Smit et al, *Study on Due Diligence Requirements Through the Supply Chain, Part III: Country Reports* (January 2020) 38-55, 51.

Appendix

Activities for which Operators are Subject to Strict Liability

[Note: a list of activities subject to strict liability under Annex III of the EU Environmental Liability Directive is summarised below. Annex III provide specific requirements that the activities below must be governed by particular legal frameworks, e.g. 'All discharges of substances into groundwater which require prior authorisation in pursuance of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances.' For ease of reference, the pertinent legal frameworks are excluded for this list.]

1. The operation of installations subject to permit in pursuance of Council Directive 96/61/EC.
2. Waste management operations.
3. Discharges into the inland surface water.
4. Discharges of substances into groundwater.
5. The discharge or injection of pollutants into surface water or groundwater.
6. Water abstraction and impoundment of water.
7. Manufacture, use, storage, processing, filling, release into the environment and onsite transport of dangerous substances, dangerous preparations, plant protection products and biocidal products.
8. Transport by road, rail, inland waterways, sea or air of dangerous or polluting goods.
9. The operation of installations subject to authorisation in pursuance of Council Directive 84/360/EEC.
10. Any contained use, including transport, involving genetically modified micro-organisms.
11. Any deliberate release into the environment, transport and placing on the market of genetically modified organisms.
12. Transboundary shipment of waste within, into or out of the European Union.
13. The management of extractive waste.
14. The geological storage of carbon dioxide.

