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INTER-GENERATIONAL INTERESTS IN EUROPEAN ENVIRONMENTAL LIABILITY REGIMES

INTERESSES INTER-GERACIONAIS NOS REGIMES EUROPEUS DE RESPONSABILIDADE AMBIENTAL

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Summary: 1. The inter-generational impact of environmental crimes and civil wrongs. 2. Defining inter-generational interests in the context of European law. 2.1. 'Rights of future generations' or 'inter-temporal interests'? 2.2. Placing inter-temporal interests in the law. 3. Inter-temporal interests in European civil and criminal liability regimes. 3.1. The principle of prevention in liability regimes. 3.2. Remediation as the principal form of redress in the environmental liability directive. 3.3. Environmental remediation in the proposed revised ECD. 3.4. Remediation in private liability claims. 3.5. Duties of the state to restore nature where liability regimes fail to reach. 3.6. Public participation in the interest of children and future generations? 4. Conclusions.

Abstract: Environmental liability rules within the European Union can be used to safeguard the interests of children and future generations. This work attempts to analyse civil and criminal environmental liability regimes through the lens of inter-temporal interests instead of 'rights of future generations,' given the problems with implementing these nascent rights in many EU states. It argues that public protection of inter-temporal interests is grounded in solidarity and the principle of sustainable development, requiring national institutions to conserve options and resources in a non-discriminatory manner. These interests are safeguarded through rules in EU liability regimes that prevent environmental damage, prioritize remediation even in criminal matters, and permit broad public participation to represent inter-temporal interests. It argues that these interests should also be carefully considered in private liability suits and whenever states intervene to remediate environmental damage at public expense, such under the proposed nature restoration regulation.

Resumo: As regras da responsabilidade ambiental na União Europeia podem ser utilizadas para salvaguardar os interesses das crianças e das gerações futuras. Este artigo procura analisar regimes de responsabilidade ambiental civil e criminal sob a lente de interesses inter-temporais ao invés de "direitos das gerações futuras", dados os problemas com a implementação desses direitos nascentes em muitos estados da UE. Argumenta-se que a proteção pública de interesses inter-temporais é fundamentada na solidariedade e no

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princípio do desenvolvimento sustentável, exigindo às instituições nacionais que conservem opções e recursos de um modo não-discriminatório. Esses interesses são protegidos através de regras dos regimes de responsabilidade da UE que previnem danos ambientais, priorizando a reparação mesmo em questões criminais e permitindo uma ampla participação pública na representação de interesses inter-temporais. Alega-se ainda que estes interesses devem ser cuidadosamente considerados em processos de responsabilidade entre privados, bem como em situações em que os Estados intervêm para remediar danos ambientais a custo do erário público, tal como proposto no regulamento de restauro da natureza.

Keywords: inter-generational equity, environmental liability directive, environmental crime directive, environmental remediation, solidarity.

Palavras-chave: justiça intergeracional, diretiva responsabilidade ambiental, diretiva crime ambiental, reparação ambiental, solidariedade.

1. The inter-generational impact of environmental crimes and civil wrongs

Some acts inflict lasting and wrongful damage on shared natural resources, ecosystems and human health, affecting the enjoyment of the right to a healthy environment for decades, if not centuries. Here in Europe, we can bear witness to the consequences of such acts committed over the last century in our cities and countryside, and in our changing climate.[2] The acts that caused these harms may not have been crimes at the time, or even civil wrongs, yet they have nonetheless inflicted an irreparable loss.

Within the European Union, there has recently been a push to prevent acts causing lasting harm and to remediate their consequences more effectively. These efforts include a series of remarkable proposals: major revisions to the Environmental Crime Directive (ECD),[3] a Corporate Sustainability Due Diligence directive,[4] revisions to the recast Industrial Emissions Directive (IED),[5] a new approach to regulating chemicals,[6] a framework regulation on nature restoration.[7] These instruments recognize that the environmental crisis in Europe stems not (merely) from the lack of adequate standards, but how existing standards are enforced, including through criminal and civil liability rules (Hildt L, Weyland R, 2022; Hedemann-Robinson M, 2015). It appears that the growing recognition of 'rights of future generations' could aid efforts to make the law more effective at preventing and remediating long-term harm, yet recent practice shows that hurdles must still be overcome before these rights are fully enforceable. As such, it can be helpful to approach the issue from a different perspective: that of public, inter-temporal interests. This work seeks to test this kind of interest-based approach to future generations by examining how liability regimes (civil, criminal and *inter privos)* safeguard these inter-temporal interests. The aim is to explore whether analysing legal regimes from the perspective of inter-temporal interests may be of value in advancing the cause of sustainability and solidarity within Europe.

The study will begin by clarifying the nature of the inter-generational interests at stake, then examine how these interests are connected to the values and objectives of the Union. Next, it will explore the extent to which these interests are safeguarded in the Environmental Liability Directive

2. Commission on Human Rights of the Philippines. National Inquiry on Climate Change Report. 2022. Available at DOI 10.1007/s10584-013-0986-y.

3. Proposal for a Directive of the European Parliament and of the Council on the protection of the environment through criminal law and replacing Directive 2008/99/EC. COM(2021)851 final of 15 December 2021.

4. Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937. COM (2022) 71 final of 23 February 2022.

5. Proposal for a Directive of the European Parliament and of the Council amending Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste. COM(2022)156 final/3 of 5 April 2022.

6. Commission Staff Working Document, Restrictions Roadmap under the Chemicals Strategy for Sustainability. SWD (2022) 128 final of 25 April 2022 of 25 April 2022

7. Proposal for a Regulation of the European Parliament and of the Council on nature restoration. COM(2022) 304 final of 22 June 2022.

(ELD),[8] Environmental Crime Directive,[9] and other special liability regimes, in particular within rules on prevention and remediation of damage, including remediation by the state where civil liability has failed to address the harm. How these interests fit within private liability claims will then be considered, followed by an examination of public participation rights for inter-temporal interests. The overall aim is to better understand how environmental liability regimes of secondary law can—and should—put inter-generational interests at their core, ensuring that environmental damage is prevented, or at least remedied, before it becomes a crime against the future.

2. Defining inter-generational interests in the context of European law

Before examining the place of inter-generational concerns in liability regimes, it is necessary to explain the choice to focus on 'inter-temporal interests' instead of 'rights of future generations', then to clarify the connection between these interests and the EU legal order so as to identify, in concrete, what the content of these interests would be.

2.1. 'Rights of future generations' or 'inter-temporal interests'?

A great deal of attention has been dedicated lately to the rights of future generations. Within Europe, the ideas first proposed by Edith Brown Weiss in the 1990's have been taken up by scholars, activists and politicians, encouraged by international soft law such as the 2013 report of the UN Secretary General on International Solidarity and Future Generations.[10] This trend is worldwide. A comparative study by Faure and du Plessis found that intra-generational rights are legally actionable in many legal orders in Africa (Faure M, du Plessis W. Eds, 2011: 607-608; du Plessis A, 2011; Sarpong GA). These rights of future generations are applied as a standard of review and the source of specific duties, such as the climate impact assessment ordered by the South African courts in the *Thabametsi* case (Humby T-L, 2018). Faure and du Plessis conclude that this framework, combined with broad *locus standi* and the practice of judicial activism, has made the courts invaluable for protecting the rule of law in environmental matters in Africa (Faure M, du Plessis W, 2011). Indian courts have also enforced the rights of future generations in relation to the principle of sustainable development (Anderson MR, 2002), famously in the *People United for Better Living in*

8. Directive 2004/35/CE 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. OJ L 143/56 of 30 April 2004.

9. 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. OJ L 328 28 of 6 December 2008.

10. Intergenerational solidarity and the needs of future generations. Report of the Secretary-General. A/68/322 of 15 August 2013.

Calcutta v. State of West Bengal.[11] The Philippine Supreme Court's ruling in *Minors Oposa* is also emblematic of judicial recognition of these rights.[12]

The practice within Europe regarding the rights of future generations is more mixed. For one, in Italy, the constitution was reformed in early 2022 to add the protection of "the environment, biodiversity and ecosystems, also in the interest of future generations" among the aims of the Republic.[13] Recently, in *Neubauer and others*, the German Constitutional Court found that Article 20a GG gives rise to a duty of the state to "protect and promote the legal interests of life and physical integrity", including towards future generations.[14] However, the BVerfG held that these duties do not give rise to a subjective right or to *locus standi* in the present.[15] Thus, its acknowledgement of duties towards future generations falls somewhat short of the recognition of a right. Indeed, on closer look, both the Italian constitutional reform and the BVerfG frame the protection of future generations in terms of *interests* more than rights.

This practice suggests that there are still thorny systemic issues when it comes to 'rights of future generations' within some European legal traditions. There could be various reasons for this: the notion of legal personhood, the emphasis on individual rights, the lack of a strong tradition of public interest standing in many places (let alone *actio popularis*), the need for judicial self-restraint to avoid transforming political questions into legal duties, undermining the separation of powers on which the rule of law depends (Beckerman W, Pasek J, 2001). Perhaps these issues can, or should, be overcome (Ekardt F, 2020). But this work proposes a different approach, acknowledging these limits and instead attempting an analysis based on interests, not rights.[16]

In some legal orders, the interaction between different types of interests shapes legal institutions, especially those in the field of administrative (or public) law (Glinski C, Rott P, 2011). In these traditions, such as that of Italy (*inter alia,* Rossi G, 2017), interests are seen as being either public or private in nature, that is, proper to the state or to individuals respectively. Public interests are those pursued by the state through its actions and are a parameter for the validity of acts of public authorities. Private interests can coincide with public interests. When this is so, they can be qualified under the law and become relevant for the application of legal rules, such as those permitting participation in decision-making processes or access to judicial remedies.

11. People United for Better Living in Calcutta, v. State of West Bengal AIR 1993 Cal 215. Vellore Citizens' Welfare Forum AIR 1996 SC 2715 (1996) 5 SCC 647.

12. Judgment of the The Philippines, Manila Supreme Court of 13 July 1993. GR No. 101083; for critical commentary on the case, see Fitzmaurice M (2009: 195-230).

13. Article 9 (author's translation). Article 41 was also reformed, specifying that environmental protection is one of the public interests that may limit the right to private economic initiative.

14. Order of the Bundesverfassungsgericht of 24 March 2021. BvR 2656/18/1, BvR 78/20/1, BvR 96/20/1, BvR 288/20, § 145-146; on the case, see Ekardt F (2022: 4-10).

15. §§ 119, 146.

16. In this, we acknowledge the criticisms raised by Pasek and Beckerman of the notion of 'rights' of future generations: Beckerman W, Pasek J (2001).

We can take the example of environmental protection. When an individual's private interest coincides with the public interest in environmental protection, it can be qualified under the law as *sufficient*, thus granting them access to remedies to challenge an act of a public authority affecting the environment. This standing is limited to the extent to which their private interest reflects the public interest: for example, they can challenge a zoning plan because they use an area slated for development for recreational purposes, but not because they are simply concerned about the impact on protected waterfowl.[17]

It is primarily the task of the public authorities to pursue public interests. This is a different dynamic than we find with individual (subjective) rights, where the individual has the choice to exercise their rights (eg. freedom of religion, education, privacy), which the state must respect, protect and fulfil. It is true that public interests and individual rights can complement each other: the right to education, for example, and the public interest in having an educated population. State intervention, such as reforming curriculum standards, can both pursue its public interest and fulfil this right. Yet even if public interests and individual rights can be linked, this is not necessary. The state can act to protect and promote public interests connected to future generations' wellbeing, irrespective of whether a corresponding individual right exists.[18]

Moreover, since these interests regard the protection of children already alive as well as those that will be born tomorrow, the term 'future generations' is perhaps not best suited for this purpose. Instead, we can refer to these public interests as 'inter-temporal interests', following the terminology used by the philosopher Felix Ekardt in his works on sustainability and justice.[19]

This study frames the matters to be analysed in terms of interests—instead of 'rights of future generations'—not in order to cast doubt on whether human rights in Europe should develop in this direction, but in order to explore whether an interest-based approach may be helpful to identify what is at stake and how it is protected. If this approach is useful in relation to liability rules, it could be applied in other areas of environmental regulation and planning, especially in jurisdictions—like that of Italy—where future generations are not (yet) deemed to be vested with rights.

Therefore, the next section seeks to explore whether the protection of inter-temporal interests can be grounded in legal rules and principles within the EU, and if so, what the content of these inter-temporal interests would be.

17. However, under the terms of the 1998 Aarhus Convention, environmental associations meeting any criteria under national law are deemed to hold a subjective interest where this is required by law, which means that their private interest coincides with the public interest in environmental protection in any case:.see Article 2 § 5 of the 1998 Aarhus Convention. See also Judgment of the Court of 12 May 2011, Trianel, C-115/09, ECLI:EU:C:2011:289, § 59.

18. Analogously, Judgment of the Court of 24 October 1996, *Aannemersbedrijf P. K. Kraaijeveld BV and Others*, C-72/95, ECLI:EU:C:1996:404.

19. This follows the terminology used in Ekardt's theories of sustainability and justice: Ekardt F (2020).

2.2. Inter-temporal interests, solidarity and sustainable development in EU law

It may be that inter-temporal interests are found enshrined in the values, primary law, and legal principles of the European Union. Identifying where these interests are placed within primary law can both demonstrate the commitment of the Union to pursuing these interests and shed light on their contents.

The value of solidarity, enshrined in Article 2 TEU, is one starting point.[20] At its core, solidarity is a recognition of a community of interests and values. It is, fundamentally, a "cooperative and social-justice-led concept" (Ross M, 2010; see also Shelton D, 2010). Stjernø understands solidarity as stemming from a desire to share resources with those struggling or in need, implying "a readiness for collective action and a will to institutionalise that collective action through the establishment of rights and citizenship" (Stjernø S, 2005: 2). In short, solidarity comes before any legal obligation to act: it is the spirit behind the letter of the law, the fabric from which new rights and duties are made.

Solidarity can be one way of understanding the reason for certain duties of environmental protection and how these interests are represented in public decision-making. Neither water nor the fish swimming in it may go to court, as AG Eleanor Sharpston famously quipped,[21] but we have nonetheless created rules aimed to protect fish and waters. These duties can be seen as an expression of solidarity with our descendants' needs and interests, if not also with the natural world itself. Solidarity explains why their needs are encompassed within the public interests pursued in environmental decision-making and policy.

Inter-generational interests are also connected to the principle of sustainable development, enshrined within the Treaties and secondary law (Jakab A, 2021; Gehring MW, Harrington AR, 2021; Bándi G, 2020; Scotford E, 2013). The famous Brundtland definition of sustainable development implicitly recognizes a community of interests between present and future generations. Implementing the principle of sustainable development requires a delicate balancing act between lawful actions in the present and lawful needs of others distant in time, and between the social, economic and environmental concerns of all[22]. This balancing is to be carried out in accordance with the principles of inter- and intra-generational equity.[23] Here we find inter-temporal interests specifically encompassed within sustainable development; indeed, for Edith Brown-Weiss, inter-generational equity is the normative core of sustainable development, which "arguably otherwise rests

20. On solidarity, see inter alia Stjernø S (2005); Ross M (2010: 23-45); Ross M, Borgmann-Prebil Y, eds. (2013); Domurath (2013); Ku¨c¸u¨k E (2016); Biondi A et al (2018).

21. Opinion of Advocate General Sharpston of 12 October 2017, Trianel, C-664/15, ECLI:EU:C:2017:760, § 77.

22. The Brundtland definition, and the 'three-legged' model of sustainability that gives equal weight to environmental, social and economic concerns, has been criticised: (Dawe NK, Ryan KL, 2003; DiPrete Brown L et al, 2020; Atapattu SA et al, 2021).

23. On equity in international environmental law, see Shelton D (2016).

on a sense of *noblesse oblige* by the present generation" (Brown Weiss E, 1992).

However, like the principle of sustainable development, there is uncertainty about the normative value of inter-generational equity as a principle of international environmental law (Molinari C, 2015, Fitzmaurice M, 2009: 104; Cordonier Segger M-C, Khalfan A, 2004). Beyerlin, following the theory of legal norms of Dworkin, includes it among the 'twilight norms' in international environmental law: a principle, and occasionally a legal principle, applicable in interpreting other legal rules, but not binding in itself (Beyerlin U, 2016). As a principle, inter-generational equity can offer a flexible, timely answer to new circumstances in applying the law, and circumvent the thorny process of international rulemaking (Brown Weiss E, 2013: 39-40). Others agree on its place as a 'guiding principle' in the application of substantive norms irrespective of its binding nature, one that "provides context for decisions in international environmental law, and informs the development of new law" (Redgwell C, 2016: 199; similarly, see Molinari C, 2015: 144; see also Boyle AE, 2008).

As Norton observes in his seminal essay on sustainability, there are two different approaches to implementing inter-generational equity (Norton B, 1999). For one, we could first compare utility across generations, as suggested by proponents of weak sustainability, and then ensure that the total aggregate utility remains stable over time. Alternatively, we can specify which natural goods and resources should be maintained so as to guarantee that future peoples enjoy the same possibilities as we do today. This approach corresponds more or less to the notion of strong sustainability.

One of the clearest—if controversial—articulations of a strong sustainability approach to inter-generational equity can be found in the works of Edith Brown Weiss. In her more recent writings on the matter, she identifies three core elements to the principle of intergenerational equity: "conservation of diversity of natural and cultural resources (or comparable options); conservation of quality (or comparable quality); and equitable or nondiscriminatory access to the earth and its resources" (Brown Weiss E, 2014: 102-103). The use of the term "comparable", added in her later formulations of this principle, recognises that trade-offs are inevitable. In her view, such trade-offs should still offer future persons an array of options and resources that is, on balance, no worse than that enjoyed in the present (Brown Weiss E, 2014: 100-103). If so, inter-temporal interests would encompass having comparable options, comparable quality of resources, and non-discriminatory access to development and the natural world.

The problem with the strong sustainability approach to inter-generational equity is that it assumes that society can agree on a set of shared values so as to be able to designate certain "features and processes constituting the environment as essential for future well-being, claiming that these features and processes are so important that any bequest to the future which does not protect them will inevitably leave the future worse off than they would have been had these features been protected" (Norton B, 1999: 130). When Norton wrote this analysis, two decades ago, he was uncertain about whether this strong sustainability approach was feasible. He questioned whether it was possible to find consensus on a set of shared values, or a

method for evaluating them over time, so as to be able to identify what environmental resources and what options should be maintained for future generations. Yet within the European Union today, a rich and growing body of environmental legislation arguably expresses a shared agreement that certain natural resources must be safeguarded in the common interest. Habitats, biodiversity, water quality, climate, air quality: all of these are the subject of clear rights and duties. This body is still evolving and even growing, as recent efforts to enhance protection of waters and soils show. Each of these instruments shows the real and enduring commitment of European society to maintaining natural goods and resources over time. Arguably, this body of law expresses the consent necessary to embrace a strong sustainability approach, one that puts inter-generational interests in the center of the law. The options and resources that should be conserved are, at the least, those that are safeguarded in transnational legal instruments.

Inter-temporal interests would thus include having comparable resources and options, and non-discriminatory access to the same, to these resources. We can therefore begin to look at what place these inter-temporal interests find in criminal and civil liability regimes.

3. Inter-temporal interests in European civil and criminal liability regimes

Liability regimes set in place rules to address wrongful acts causing environmental damage based on the principles of environmental law, primarily those of prevention and polluter-pays (Bergkamp L, 2001; Brunnée J, 2004; Faure M, 2009; Hinteregger M, 2008; Bergkamp L, Goldsmith BJ, 2013; Bergkamp L, 2020).

This section will evaluate in detail, first, how the rules of EU civil and criminal liability regimes prevent environmental damage and how their deterrent effect may be reinforced; second, how civil liability rules seek to ensure remediation in kind over payment of damages; third, how remediation is being introduced into criminal proceedings, and how these rules may be coordinated with civil remedies provided by the ELD; next, how inter-temporal interests are balanced against property rights in liability claims between private parties; and finally, how public participation rules may reinforce the protection of inter-temporal interests in civil and criminal liability cases.

3.1. The principle of prevention and liability regimes

Preventing environmental damage is one of the clearest ways to ensure that future generations have a comparable range of options and resources as we enjoy today (Viñuales JE, 2012). Liability rules can prevent losses in multiple ways: serving as a deterrent, giving an incentive for operators to put in place prevention and control regimes for risky activities, or setting in place procedures for obtaining interim relief so that a risk of unlawful harm may be mitigated once it appears (Fogleman V, 2019).

This principle has been formally recognized in the primary law of the European Union since article 130r of the SEA, now Article 191 § 2 TFEU. It is implemented in numerous rules contained in secondary law, closely connected to duties of diligence (de Sadeleer N, 2020: 103-107).

Economic analysis of liability rules shows that the design of liability regimes and the institutions for its enforcement matter in shaping polluter behaviour (Faure M, 2009: 249; Shavell S, 1984). Prevention is greatest when persons can predict with reasonable certainty that they will be held to remediate the full consequences of wrongful pollution or accidents (Faure M, 2009: 249). The choice between strict liability or negligence rules can also affect the level of precaution that the operator adopts, as do numerous other factors: the size of the operator, whether or not they are covered by insurance, their ability to avoid liability through asset protection strategies or extra-legal means (Faure M, 2009: 90-91). The choice between a strict liability or negligence standard can be based on an economic efficiency calculation: are the costs of prevention greater than the potential externalities inflicted by an involuntary release of polluting materials (i.e. an 'accident')? (Bergkamp L, 2001: 77-82) For Bergkamp, this is a reason "not to be overly enthusiastic about the deterrent effect of liability law" (Bergkamp L, 2001: 90-91).

Civil liability may be less effective when the potential harm cannot be easily remedied. Administrative sanctions and criminal penalties reinforce civil liability rules in these cases by providing additional deterrence. Under the ECD, states are under a duty to provide "effective, proportionate and dissuasive penalties" for both natural persons (Article 5) and legal persons (Article 7) for certain types of environmental crimes. Secondary law applicable to certain especially hazardous activities binds member states to set in place "effective, proportionate and dissuasive" sanctions. This can be found in Article 28 of the Seveso-III Directive,[24] Article 34 of the offshore oil and gas operations Directive,[25] and Article 79 of the recast Industrial Emissions Directive (IED).[26]

Given the scale of environmental crime—the fourth largest type of criminal activity worldwide, after drug trafficking, human trafficking, and counterfeiting, according to a 2021 factsheet by the European Commission—it appears that even criminal penalties are insufficiently dissuasive.[27]

Proposed amendments to the ECD and the IED aim to address this shortcoming. These two instruments are closely connected: many large-scale environmental crimes have been preceded by numerous violations of administrative rules, such as conditions set in operational permits or

24. Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substance. OJ L 197/1 of 24 July 2012.

25. Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC. OJ L 178 66 of 28 June 2013.

26. Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast). OJ L 334/17 of 17 December 2010.

27. Communication from the Commission to the European Parliament and the Council on stepping up the fight against environmental crime. COM(2021) 814 final of 15 December 2021.

reporting requirements, so preventing these crimes starts with effectively enforcing the rules set in the IED. This requires appropriate emissions standards, adequate inspections and sanctions for violations. As studies on major industrial disasters in Spain, Hungary and the Netherlands show, these were preceded by the negligence (or complicity) of local authorities when it came to more minor violations of environmental regulations and rules. This included coordinating dates and times for inspections with the inspected companies, and failing to take action when violations are found (Fajardo T, Fuentes Osorio JL, 2015: 9).[28]

To this end, the revisions to Article 79 of the recast IED specify that administrative fines must be "proportionate to the turnover of the legal person or to the income of the natural person having committed the infringement," and must ensure that they "effectively deprive the person responsible for the violation of the economic benefits derived from that violation."[29] The amount of the fine must increase for repeat offenses and be commensurate to the seriousness of the damage. Likewise, revisions to the ECD also seek to provide "more dissuasive penalties for environmentally harmful activities."[30] It aims to do so by setting minimum sanctions lacking in the current ECD. This would help eliminate a 'waterbed' effect where companies delocalize their potentially damaging activities to areas with lower levels of sanctions or less effective enforcement, undermining the level playing field across the Union.[31]

In addition to strengthening sanctions, the revisions to the ECD seek to promote judicial and police cooperation for transnational environmental crimes. A 2021 Eurojust study reports that an average of 10 cases per year relating to environmental crime were referred to Eurojust between 2014 and 2018, a paltry number compared with the scope of environmental crime. The study shows that majority of environmental crimes referred to Eurojust were connected with more traditional crimes such as tax fraud, forgery and money laundering, and a substantial number of them stemmed from the *dieselgate* affair.

Ineffective or uneven enforcement of liability rules undermines the preventative force of these regimes and harms inter-temporal interests, especially when the effect of the crimes is to inflict lasting harm on natural systems and resources. It is critical that dissuasive effect of environmental liability regimes be strengthened where it is shown to be lacking, including

28. See also the February 2012 report on the 2011 fire at the Moordijk Chemie-Pack prepared by the Dutch Safety Board, available at https://www.onderzoeksraad.nl/nl/page/1571/brand-bij-chemie-pack-te-moerdijk-5-januari-2011.

29. Proposal for a Directive of the European Parliament and of the Council amending Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste. COM(2022) 156 final/3 of 5 April 2022

30. Recitals 3 and 5, 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. OJ L 328 28 of 6 December 2008.

31. Proposal for a Directive of the European Parliament and of the Council on the protection of the environment through criminal law and replacing Directive 2008/99/EC. COM(2021)851 final of 15 December 2021: 5-6.

through more effective judicial and police cooperation for transnational crimes.[32] While prevention does have costs, these costs need to be balanced against the potential harm to public interests, including inter-temporal interests. Proposed revisions to the ECD and IED harmonizing sanctions and strengthening inter-state cooperation should be welcomed. At the same time, the effectiveness of the ELD in preventing damage should be carefully assessed in the ongoing review of the directive.

3.2. Remediation as the principal form of redress in the environmental liability directive

The principle that the polluter should pay is the foundation of the system of remedies for environmental damage.[33] The system of remedies provided in the ELD is remarkable in how it applies this principle, also in relation to inter-temporal interests.[34]

It is true that the ELD applies only to "significant adverse effects" on natural sites or water quality, or land contamination that creates a significant threat to human health.[35] The threshold of significance limits the scope of the directive and the consequent duties of remediation it creates. They are, nonetheless, an important framework that may be implemented beyond the scope of the directive (as will be discussed below).

Under the terms of the ELD, economic operators must remediate significant damage to the environment caused within the course of their activities.[36] Liability regimes provide remedies not just to make polluters pay, but to restore environmental resources that have been wrongfully harmed. This kind of remedy is not unknown in tort or international law. According to the international customary rules governing state responsibility, when a wrongful act takes place, the state must make amends through restitution: they must "re-establish the situation which existed before the wrongful act was committed."[37] Only when this is materially impossible is reparation in

32. A 2021 report shows that an average of 10 cases per year were referred to Eurojust between 2014 and 2018, a paltry number compared to the scope of environmental crime. That majority of these were connected with non-environmental crimes such as tax fraud, forgery and money laundering, while many referrals stemmed from the dieselgate affair. Eurojust. Report on Eurojust's Casework on Environmental Crime, 2021. DOI 10.2812/439500. Available at: https://www.eurojust.europa.eu/publication/report-eurojusts-casework-environmental-crime, pp. 7-9.

33. On the polluter-pays principle, see de Sadeleer N (2020: 31-83); Schwartz P (2015: 429-450); de Sadeleer N (2015: 232-237).

34. The rules on remediation in the ELD are broadly inspired by those in place in the United States of America, but with some important differences, including the role of public authorities in preparing the initial remediation plan and the definition of environmental damage. For a comparison, see Nicolette JP et al (2013: 181-219)

35. Article 2 § 1. The narrowness of this scope—and the exclusion of airborne pollution that does not also impact soil or water quality—has been criticized:

36. On remediation in the ELD, see Bigham GN et al (2013: 95-117). The possibility that operators pay instead of providing remediation led the Commission to open infringement proceedings INFR(2007)4679 against Italy, later closed in 2014 when reforms to the environmental code were made.

37. Article 35 Draft articles on Responsibility of States for Internationally Wrongful Acts. Yearbook of the ILC, 2001, vol. II (2) of 2001.

the form of payment of damages acceptable. Analogously, environmental liability regimes can require polluters to restore the *status quo ante* instead of merely ordering them to pay fines or damages. Such restitution (or, in the terms of the ELD, 'remediation') is arguably the best remedy for safeguarding inter-temporal interests by conserving options in a non-discriminatory manner.

Under the ELD, remediation consists in "any action, or combination of actions, including mitigating or interim measures to restore, rehabilitate or replace damaged natural resources and/or impaired services, or to provide an equivalent alternative to those resources or services as foreseen in Annex II". Annex II classifies remedial measures into four types:

a. primary remediation: this aims to "restore the damaged natural resources and/or services to, or towards, baseline condition";

b. complementary remediation: this applies when primary remediation is insufficient, and aims to "provide a similar level of natural resources and/or services, including, as appropriate, at an alternative site, as would have been provided if the damaged site had been returned to its baseline condition";

c. compensatory remediation: this serves to fill in gaps left by primary or complementary remediation, offering additional improvements to protected natural habitats, species or water quality at either the damaged site or at an alternative site;

d. remediation for interim losses: when primary or complementary measures take time to produce their effect, these measures help to compensate for the ecological services lost in the short or medium term.

The liable operator has the task of proposing a remediation plan, which the competent authorities may reject, modify or approve. The choice of the specific remedial measures is based on a series of factors set out in article 1.3 of the ELD Annex. Interestingly, these include "The extent to which each option will prevent future damage".

When primary remediation is insufficient to restore the damaged resources to baseline condition in the short term, the determination of which additional remediation measures are necessary is quite complex (Bigham GN et al, 2013). [38] Habitat Equivalency Analysis and Resource Equivalency Analysis methods can be employed. These first calculate the amount of the lost resources, then determine the amount of remediation needed by calculating the benefits of the proposed remediation measure over time, with the benefits discounted according to a pre-determined rate.[39] The higher the discounting rate, the more emphasis will be given to short-term losses. Inter-temporal interests should be taken into account in setting a discounting rate

38. On equivalency analysis in general, see Lipton J et al (2018: 21-42).

39. For an example, see the guidance provided by the UK The Environmental Damage (Prevention and Remediation) Regulations (2009: 80-82).

that adequately accounts for losses future generations will incur (Revesz RL, 1999).

The only exception to the duty to remediate is when the costs are "disproportionate to the environmental benefits to be obtained", so long as any significant risks to human health and natural resources are adequately addressed.

The rules on remediation in the ELD respect the principle of inter-generational equity and safeguard inter-temporal interests by ensuring that comparable resources or options are restored following the environmental harm.

However, implementing this framework is no simple task. For one, identifying who is responsible for remediation can be challenging when the operators are involved in complex business relationships. Special liability regimes provide rules to extend the liability of undertakings over accidents caused by subsidiaries or contractors. For example, Directive 2013/30/EU on the safety of offshore oil and gas operations provides, in article 3 § 2, that "Member States shall ensure that operators are not relieved of their duties under this Directive by the fact that actions or omissions leading or contributing to major accidents were carried out by contractors."[40] Article 7 of the same directive establishes the vicarious liability of the licensee to remediate any damage caused in the course of operations carried out on their behalf. It may be that extending liability rules would be helpful to improve the effectiveness of the ELD. Authorities still need to show that the activities of the operators called upon to enact remediation measures are linked with the damage that occurred.[41]

Another issue is that remediation can be very costly. The amount of these costs can be difficult to predict and may exceed the resources of even a large and profitable company.[42] The legal framework on environmental liability could require insurance coverage or financial securities to ensure that companies undertaking particularly risky activities are able to remediate damage they may cause. For one, the offshore oil and gas directive requires operators to provide financial assurances as a condition for granting an

40. Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC. OJ L 178 66 of 28 June 2013.

41. Judgment of the Court [GC] of 9 March 2010, ERG, C-378/08, ECR 2010 I-01919, § 65.

42. The practice in the application of the ELD shows that companies often lack the resources to cover the cost of large-scale accidents. See the 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 of 14 April 2016. In the case of the massive spill of aluminium sludge at Kolontár, Hungary in 2010, the company was nationalized to ensure that it could continue operations despite facing a fine of half a billion euros, including costs to decontaminate the area, rehouse affected persons (and provide them with €330 euros in compensation). The company was liquidated in 2013. See the 2011 report of Ágnes Gajdics, The „Kolontár Red Mud Case", Justice and Environment, available at http://www.justiceandenvironment.org/_files/file/2011%20ELD%20Kolontar.pdf, at p. 16.

operational license.[43] On the contrary, the ELD only provides that states must "take measures to encourage the development of financial security instruments and markets by the appropriate economic and financial operators, including financial mechanisms in case of insolvency, with the aim of enabling operators to use financial guarantees to cover their responsibilities under this Directive."[44] This has been criticised for lacking any requirement that operators engaged in risky activities provide financial security against their potential liability. This means that insolvent companies or those with few assets can essentially avoid bearing the full costs of remediating the damage they cause (Bergkamp L, 2020: 11-13).

Adding a provision on financial assurances to the ELD would be no simple task. If an insurance or security requirement were added to the ELD, it would be critical to structure it to ensure that operators still had a strong incentive to take preventative action (avoiding 'moral hazard') and that risk pools were properly managed (Faure M, 2009: 263-267). A recent study by Fogleman observes that, while some member states require financial security against environmental damage caused in the course of hazardous activities, this kind of insurance is unavailable in many EU states. She concludes that requiring security or insurance under the ELD would not be viable at this time.[45] As Bergkamp also notes, there are innate difficulties in insuring against environmental liability, including uncertain probability of risks, the expansion of risk exposure due to legal reforms and judicial reinterpretations, and long latency periods for risks (Bergkamp L, 2001: 107). However, there are alternatives to financial security for addressing the problem of limited liability, such as raising minimum capital requirements, permitting unlimited shareholder liability for environmental torts, and better use of compliance mechanisms (Faure M, 2022).

An additional challenge in implementing the ELD is that of monitoring remediation works carried out by operators; indeed, no specific monitoring duties are set out in the ELD. Yet full remediation, including through compensatory measures, is critical for safeguarding inter-temporal interests. Its priority is justified by the values at the heart of the legal order in Europe, including inter-generational solidarity and the polluter-pays principle. Therefore it would be important to assess, in the ongoing review of the ELD,[46] the practice of member states and what measures might help strengthen their capacity to ensure full remediation takes place. Judges and public authorities must, likewise, ensure that the framework on remediation is effectively applied, despite the technical challenges they may face in doing so.

43. Article 3 § 4 of Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC. OJ L 178 66 of 28 June 2013.

44. Article 14(1).

45. See the conclusions of Fogleman V (2022: 2022).

46. The Commission is currently evaluating the ELD, a procedure started with Ares(2021)7328179. Public consultations closed on 9 August 2022.

3.3 Environmental remediation in the proposed revised ECD

As we've seen, criminal penalties can reinforce the deterrent effect of civil liability regimes. Proposed revision of the ECD would introduce duties to remediate environmental harm, reinforcing those set forth in the ELD in application of the polluter-pays principle.[47] This proposal was presented by the Commission in December 2021.[48] Subject to the ordinary legislative procedure, at the time of writing it is in first reading.

The revised ECD would make remediation relevant within criminal sentencing. For one, member states would be under a duty to ensure that judges have the power to sentence a natural or legal person convicted of an environmental crime to "reinstate the environment within a given time period."[49] Criminal penalties are traditionally seen as having two purposes: punishment and deterrence.[50] Both purposes could be served by including reinstating the environment as an accessory sanction.

However, there is a need to coordinate this provision with the remedies provided in the ELD. As for the drafting, by 'reinstate the environment' presumably the legislator refers to remediation in the sense of Annex II of the ELD, but clarification would be helpful here. One of the challenges of environmental criminal justice is the highly technical and novel nature of these crimes, which can leave police, public prosecutors and judges uncertain on how to apply the law. Drafting precision is therefore of crucial importance, at least in transposition.

More critically, a duty of remediation and a sentence of reinstatement can both be applicable to the same situation. If a crime also falls under the ELD and both matters are raised before a criminal judge, then there is no need for the judge to both order remediation and sentence the person to reinstate the environment. Logically, therefore, the sentence of reinstatement would be applicable when remediation was *not* already required under the ELD.

These criminal sanctions could serve inter-temporal interests by filling gaps in the law.[51] Indeed, there is a significant class of environmental damage that falls outside the scope of the ELD: damage that occurred prior to 30 April 2007,[52] harms that do not qualify as 'environmental damage' under the directive (as is the case for illegal wildlife trade, air pollution, or soil damage without a direct effect on human health) (see Phelps J et al, 2021: e12821), environmental damage that is not caused by economic operators in the

47. As noted in § 11 of the recitals of 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. OJ L 328 28 of 6 December 2008. On the ECD in general, see Hedemann-Robinson M (2015: 642-679); Faure M (2017: 139-146).

48. Proposal for a Directive of the European Parliament and of the Council on the protection of the environment through criminal law and replacing Directive 2008/99/EC. COM(2021)851 final of 15 December 2021.

49. Article 5 § 4(a) and Article 7 § 2(b).

50. Judgment of the ECtHR [GC] of 9 October 2003. *Ezeh and Connors v. The United Kingdom*. App. no. 39665/98 and 40086/98. at § 120, with citations.

51. On equivalency analysis in general, see Lipton J et al (2018: 21-42).

52. Judgment of the Court [GC] of 9 March 2010, *ERG*, C-378/08, ECR 2010 I-01919, § 41; Judgment of the Court of 1 June 2017, *Folk*, C-529/15, ECLI:EU:C:2017:419, § 22; Judgment of the Court of 4 March 2015, *Fipa*, C-534/13, ECLI:EU:C:2015:140, § 44.

course of their 'occupational activities'.[53] Private activities can cause significant harm to habitats and resources: a hobbyist engineer can dump waste fluids into their backyard, a gardener can plant unauthorized GMO seeds in their allotment, a family can build their home over sensitive habitats without a permit. It is true that the actions of private citizens are generally less likely to cause a significant deterioration in the health of the environment; yet even small-scale acts are capable of producing long-term effects, harming inter-temporal interests. Therefore the inclusion of remediation in the revised ECD would not be superfluous: it would further reinforce inter-temporal and public interests in environmental protection, so long as it applied in a non-discriminatory manner (Wilson L, Boratto R, 2020: 251).

The accessory sanction of remediation would need to meet the standards of legality and proportionality set out in Article 49 of the Charter, which constitute general principles of Union law.[54] They must therefore be set out in a law with a sufficient degree of precision to allow the public to foresee the consequences of their actions.[55] Specifying the forms that remediation may take by adding a *renvoi* to Annex II of the ELD would add greater precision to the ECD. Not only would this better satisfy the requirements of legality, it would also offer criminal judges guidance and a clear basis in the law, absent which they may be hesitant to sentence someone to remediation.

As for proportionality, this is also a concern in the civil liability regime. As discussed above, under the ELD, the competent authorities must show a "causal link between the activities of the operators at whom the remedial measures are directed and the pollution", even where the operators bear strict liability for any damage resulting from their activities.[56] If this causal link is required to meet the standard of proportionality in civil liability, would the same hold true in the criminal field? Criminal sanctions have the function of deterrence and rehabilitation, as mentioned above. This may justify a broader use of remedial measures, even where the link between the damage caused by the crime and remediation is more tenuous, as may be the case in wildlife crimes. We could take the hypothetical case of a person convicted of wildlife trafficking for illegally importing products from Japan made from giant clam shells (*Tridacna gigas*), a protected species listed in Annex B of EC Regulation 337/97.[57] If the judge were to sentence them to remediation, could this take the form of a financial contribution to projects primarily aimed at restoring populations of other species of giant clams, outside the

53. Article 3 § 1 and article 2 § 7 of the ELD.

54. Judgment of the Court [GC] of 3 May 2007, Advocaten voor de Wereld, C-303/05, ECR 2007 I-03633. § 49, 50 with citations.

55. Judgment (merits) of the ECtHR of 20 January 2009. Sud Fondi Srl and ors v Italy. App. no. 75909/01. para 105-110; Judgment (merits) of the ECtHR [GC] of 28 June 2018. G.I.E.M. s.r.l. and ors v Italy. App. no. 1828/06. § 241-243.

56. Judgment of the Court [GC] of 9 March 2010, *ERG*, C-378/08, ECR 2010 I-01919, § 65.

57. Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein. OJ L 61 1 of 3 March 1997. On the international trade in giant clam shells (which has grown in recent years due to more effective enforcement of bans on elephant ivory in China), see Feltham J, Capdepon L (2021).

waters of the Philippines where the *T. gigas* is exclusively found? Could remediation consist in providing financial support for a public information campaign against wildlife trafficking in general?[58] Both could be beneficial for rehabilitating the convicted trafficker, but there is still a need to respect both proportionality and legality in the sentence of reinstatement.

In addition, the proposal would also give persons accused of environmental crime an incentive to spontaneously repair the damage caused prior to their sentencing. Indeed, it introduces "the offender restores nature to its previous condition" as a mitigating circumstance.[59] Again, coordination with Annex II of the environmental liability directive would be helpful here. Does "restoring nature" include all forms of remediation, including compensation and interim remediation when the damage cannot be remedied in the short term? Would this include cases where offender does not restore nature themselves, but instead actively collaborates with the competent authorities who carry out the remediation in their stead?

Adding remediation as an accessory sanction and a mitigating circumstance could give greater space to inter-temporal interests in criminal proceedings by helping to ensure that the environmental misdeeds are remedied beyond the scope of the ELD. This would be a major advancement, but only if judges are confident enough to apply these new provisions. Drafting precision and coordination with the ELD is key, but so is ensuring that criminal judges have access to adequate technical assistance and knowledge, including through participation of the public concerned, as will be discussed below.

3.4 Remediation in private liability claims

When the effects of an environmental disaster falling under the ELD spread onto surrounding land, the duties of remediation extend as far as the damage goes, including into privately owned lands. However, as we've seen, the ELD does not apply in all cases of environmental harm. It also does not apply to claims brought by private parties seeking compensation for violations of their individual rights (i.e. health, property rights) caused by the damage.[60]

In general, we can ask whether the current legal framework applicable to private liability claims adequately balances inter-temporal interests against the fundamental rights of persons affected by pollution. Civil liability suits may indirectly serve inter-temporal interests when they ensure that comparable environmental resources and options are restored. On the contrary, in cases where the ELD does not apply, landowners impacted by pollution may be limited to claiming monetary compensation instead of clean-up of their land. The result can be that long-term contamination is left in place, leading to a sacrifice of inter-temporal interests.

58. Sanctions in kind for wildlife trafficking crimes are discussed in Phelps J et al. (2021: e12821).
59. Article 9.
60. Article 1 § 3.

There are structural reasons that may cause pollution to be left unremedied, such as limits on the amount of recoverable damages. A study by Hinteregger in 2008 examined the different environmental liability regimes in force among European states (Hinteregger M, ed. 2008: 437). Taking the hypothetical case of an industrial accident, she asked what remedies would be available to persons whose lands were contaminated as a result. She observed that in all fourteen states studied, a person whose land is affected by contamination has access to remedies, including the possibility of suing the polluter to clean up their land directly, or seeking an equivalent amount in damages. However, in many states the maximum recoverable amount is limited by the value of the affected land (Hinteregger M, ed. 2008: 437). In some cases, it is even limited to the decrease in the value of the land due to the contamination (Hinteregger M, ed. 2008: 437). If the cost of primary remediation exceeds this limit, then the affected landowner will have to either fund the clean-up themselves, seek state intervention, or simply sell their lands, at the cost of inter-temporal interests.

There is another reason that linking recoverable damages to land values is problematic. Land values tend to be less in areas with industrial activities or those historically exposed to emissions, and persons living near industrial areas or chronic sources of pollution are more likely to be affected by economic, cultural, or social marginalization.[61] When recoverable damages are limited by the decrease in value of the affected land, this means that polluter's potential liability is much lower in already degraded lands. This can have the effect of consolidating environmental inequality and creating "sacrifice zones" (Porter S, 2019). Requiring remediation of the damage, even when it is disproportionate to the loss in value of the affected land, would therefore help to correct for the legacies of environmental injustice in these situations, perhaps in combination with environmental restoration by public authorities (discussed below). This would better respect the principles of both intra- and inter-generational equity.

As we've seen, in cases where the ELD does not apply, the persons liable for environmental damage may be required to pay compensation only, not clean up. Even when landowners receive enough compensation for them to fully carry out remediation themselves, they may be free to use the funds they receive for other purposes. An exception to this freedom could be when the contamination continues to propagate from their land.[62] Apart from this situation, they can simply collect their check and use it as they please. Their economic loss may have been remedied, but public interests—and inter-temporal interests—are the worse for it (Kysar DA, 2018).

No doubt there is a delicate balance to be struck between protecting property rights and public interests. Requiring innocent landowners to clean up contamination contained within their lands (or to grant others access to do so) would be an interference with their private property rights, protected under article 17 of the Charter and article 1 protocol 1 ECHR (Varvaštian S, 2015). However, property rights may be limited in the general interest, even

61. In relation to Europe, see the studies of Laurian L (2014: 424-446); van den Broek B, Enneking L (2014: 77-90).

62. Opinion of Advocate General Kokott of 22 October 2009, ERG, C-378/08. at §§ 88, 107.

requiring landowners to carry out expensive clean-up operations. There may be limits on the expenses they can be required to bear, limits imposed by proportionality as well as other fundamental rights, such as the right to private and family life.[63] If we take public and inter-temporal interests into account, then perhaps we can find greater space for requiring innocent landowners to undertake remediation as a remedy in private liability claims.

Again, this matter falls outside the scope of the ELD. However, in AG Kokott's opinion in *Fipa*, duties to permit public authorities to clean-up contamination on private land may be implicit in the provisions of the ELD permitting persons affected by environmental damage to present their views to the competent authorities, who must take them into account.[64]

Unlike the ELD, the proposed Corporate Sustainability due diligence directive contains a common framework applicable to private liability claims relating to certain types of environmental damage.[65] Under the current proposal, liability would arise when a company has failed to put in place an adequate system of monitoring and prevention, including over its subsidiaries and contractors, to mitigate an adverse environmental impact when a risk arises, or to remedy this impact once it has occurred.[66]

As for remedies, the provisions of the proposal are both broad and narrow. Their potential reach is broad: the proposal provides that Member States must ensure that remedies are available to foreign-domiciled persons, and that the rules they put in place are of overriding mandatory application, even when the law applicable to the claim would otherwise be that of a foreign state.[67] However, the proposal is also much narrower than the ELD, in that it only requires liable companies to pay damages, not to remediate the harm they caused.[68] Given that European judges could potentially be called upon to issue rulings on environmental disasters throughout the world, there are certainly practical reasons for this choice. Local authorities should be the first ones tasked with protecting inter-temporal and public interests entrusted to them in the case of an environmental disaster. Nonetheless, when they take on an extra-territorial suit, European judges have an impact on these interests, for better or worse.

A recent case can shed light on why this may be the case. In January 2021, the Court of Appeals of the Hague issued judgments on three related claims

63. Order of the BVergG of 16 February 2000. 1 BvR 242/91, 1 BvR 315/99.

64. Opinion of Advocate General Kokott of 20 November 2014, *Fipa*, Case C-534/13, ECLI:EU:C:2014:2393. § 52.

65. Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937. COM(2022) 71 final of 23 February 2022.

66. The definition of adverse environmental impact in the proposal does not correspond to that of 'environmental damage' in the ELD. Article 3(b): "adverse impact on the environment resulting from the violation of one of the prohibitions and obligations pursuant to the international environmental conventions listed in the Annex, Part II."

67. Article 22 § 5.

68. European Coalition for Corporate Justice*, European Commission's proposal for a directive on Corporate Sustainability Due Diligence A comprehensive analysis*, Legal Brief April 2022, pp. 12-13, available at https://corporatejustice.org/wp-content/uploads/2022/04/ECCJ-analysis-CSDDD-proposal-2022.pdf.

seeking to hold Royal Dutch Shell liable for its failure to implement leak prevention systems in oilfields operated by a subsidiary in the Niger Delta region.[69] The Court ruled that the subsidiary who managed the oilfields was liable for losses stemming from spills that took place in 2004 and 2007. The Court then left it to the parties to negotiate the amount of the settlement. At time of writing (July 2022), no settlement has yet been reached, and the land remains contaminated and uninhabitable: not just for the men who successfully sued Shell in the Hague, but for hundreds of thousands of people (Craig J, 2022). When a settlement is reached, this may enable the claimants to rebuild their family's livelihoods elsewhere, but the harm to ecosystems, water, soil and all the connected fundamental rights will remain. Extraterritorial corporate liability, while important, can hardly be said to have provided justice in this case, let alone safeguarded inter-temporal interests connected with the Delta.

In short, the rules applicable to private liability claims may affect inter-temporal interests. Unlike the regime proposed in the ELD and revised ECD, remediation does not necessarily have a predominant role in private liability claims due to the need to balance property rights against public interests. Expanding the liability of companies over damage caused by their subsidiaries and contractors when due diligence duties are violated is an important step. Some commentators have discussed whether it would be opportune to transform the ELD into a regulation and add rules regulating private liability claims (Bergkamp, L, 2020). This addition could be justified, given that inter-temporal interests can be indirectly affected by private liability claims regarding individual rights. In any case, it is worth exploring how inter-temporal and public interests could be given greater space within the legal framework on private liability claims, whether this be through revision of the ELD or reform at a national level.

3.5 Duties of the state to restore nature where liability regimes fail to reach

While the provisions on remediation contained in the Environmental Liability directive are clear and actionable, reports suggest that states have failed to apply them to the extent possible, thus leaving no choice but for states to restore nature after the fact (Fogleman V, 2022; Bergkamp L, 2020). The need for state intervention to remediate damage is in part due to gaps in the liability regime,[70] but also to weak enforcement of liability and other environmental rules (Hildt L, Weyland R, 2022). Where liability regimes fall short, protecting inter-temporal interests may require public authorities to step in to restore lost resources and options.

Remediating environmental damage that evades the reach of liability regimes has been declared a priority of EU environmental policy, and

69. Judgment of the Court of Appeals of The Hague of 29 January 2021. ECLI:NL:GHDHA:2021:133.

70. Directive 2004/35/CE 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. OJ L 143/56 of 30 April 2004, recitals § 13; see also Bergkamp L (2001: 92-94).

recently led to a new proposed regulation on nature restoration.[71] Like certain parts of the Water Framework Directive[72] and Habitats Directive, it would freeze the current state of conservation of habitats and ecosystems (outside protected areas: including already degraded areas and urban greenlands), while setting in place a series of obligations to improve their status over time (Schoukens H, 2019; Schoukens H, 2018; Cliquet A et al, 2015). Restoration is also at the heart of the new EU soils strategy.[73]

In some cases, states have voluntarily taken on the burden of remediation despite the presence of a liable operator for political reasons. In 2020, Germany passed a law setting targets for phasing out coal power generation, necessary for Germany to meet its GHG reduction targets.[74] This included granting €4.35 billion to lignite mine operators to compensate them for the early closure of their operations, including funds to pay for the costs of remediating mines subject to closure. The Commission has opened investigations on whether this breaches rules on state aid.[75] More fundamentally, it can be questioned whether this use of state funds gives due consideration to the polluter-pays principle and inter-generational solidarity. When states pay for remediation, the costs of environmental damage are not borne by the polluters but by all taxpayers, as well as future taxpayers in as much as they are financed through debt (see, *inter alia*, Shelton D 2010: 133-135). While the benefits of restored nature may compensate the costs of financing these actions, this still shifts the burdens of remediation from the polluter to society as a whole.

Where there is no operator to hold liable, it may be in the public interest for the state to take on the burden of remediation. But when state-sponsored remediation only allows a profitable company to escape its duties, this is much more difficult to justify.

In short, inter-temporal interests need the state to restore nature where liability regimes fail. However, when state action undermines the preventive effect of liability rules, and when restoration is financed through public debt, it would be best if state-sponsored restoration were truly a last resort.[76]

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71. Proposal for a Regulation of the European Parliament and of the Council on nature restoration. COM(2022) 304 final of 22 June 2022

72. Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for the Community action in the field of water policy. OJ L 327 1 of 22 December 2000

73. Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions, EU Soil Strategy for 2030, Reaping the benefits of healthy soils for people, food, nature and climate. COM(2021) 699 final of 17 November 2021.

74. Öffentlich-rechtlicher Vertrag zur Reduzierung und Beendigung der Braunkohleverstromung in Deutschland [Act on the reduction and termination of coal-fired power generation in Germany] of 8 August 2020, available at https://www.bmwk.de/Redaktion/DE/Downloads/M-O/oeffentlich-rechtlicher-vertrag-zur-reduzierung-und-beendigung-der-braunkohleverstromung-entwurf.pdf?__blob=publicationFile&v=.

75. STATE AID — GERMANY State aid SA.53625 (2020/N) — Lignite phase-out, Invitation to submit comments pursuant to Article 108(2) of the Treaty on the Functioning of the European Union. OJ C 177 50 of 7 May 2021.

76. For example, under article 250 of the Italian environmental code (d.lgs. 3 April 2006 n. 152), the public authorities may carry out clean-up operations (*bonifica*) only when the operator liable for the damage cannot be identified, and when neither the

Reinforcing civil and criminal liability regimes should be prioritized. It will be important to what reforms may be needed at a national level to this end, especially if or when the proposed Nature Restoration Regulation is adopted.

3.6 Public participation in the interest of children and future generations?

When significant environmental damage occurs, it directly or indirectly impacts the broader public. For this reason, public participation rights guarantee that the public concerned—that is, persons whose rights or interests are affected by the environmental damage and environmental associations meeting any requirements under national law—have a role to play in the process of enforcing the liability of those who harm environmental goods.[77] Article 9 § 3 of the 1998 Aarhus Convention vests the public concerned with access to justice to enforce environmental laws. This right is reflected in the secondary law of the Union, including the ELD. To what extent do these rules allow the public to represent inter-temporal interests through their participation?

Under the terms of the ELD, the public concerned has the right to request that competent authorities intervene when environmental laws are (or are about to be) violated.[78] The directive provides that the authorities must invite the public concerned to submit their observations on remediation measures,[79] and must take these observations into account.[80] Together, these duties seek to guarantee that the participation of the public is effective and meaningful, not merely a formality.[81] Moreover, the public has access to justice to challenge the procedural or substantive legality of the decisions,

operator, the owner of the affected lands or other interested third parties, has done so. A different standard is applied to reinstatement (*ripristino*) falling under the ELD: the public authorities may carry out the reinstatement operations when the liable person has not, with some provisions to shift the costs of the necessary operations to the liable persons. However, the practice shows that operators are frequently able to evade liability through bankruptcy or corporate transformations while investigations are ongoing. Stricter presumptions of liability may be helpful, like those found in 40 USC 103, which specifically excludes family members and business entities connected to the liable company from being considered as 'bona fide' purchasers of contaminated property.

77. This includes persons affected or likely to be affected by environmental damage. States have no discretion in limiting the powers of this category to intervene, while the other two categories—persons enjoying subjective rights impaired by the damage or whose sufficient interests are affected—are defined under national law. Judgment of the Court of 1 June 2017, *Folk*, C-529/15, ECLI:EU:C:2017:419, § 44-45.

78. The 2016 REFIT review of the ELD reported that this was, however, infrequently used in most EU states: 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 of 14 April 2016, p. 4.f

79. Article 7 § 4.

80. Article 12.

81. It can be questioned whether further intervention is necessary to ensure that all groups—including those with fewer economic, cultural and social resources—can participate on equal terms. See Squintani L, Schoukens H (2019: 22-52).

acts and omissions of public authorities in implementation of the directive, such as decisions on remediation.[82]

Interestingly, when it comes to public participation rights, environmental associations are specifically empowered to represent the general interest in environmental protection, as affirmed by the CJEU[83] and by the Commission.[84] These general interests arguably include inter-temporal interests: indeed, the objective of the Aarhus Convention is to protect and improve the quality of the environment in view of "the right of every person of present and future generations to live in an environment adequate to his or her health and well-being" and it is in the light of this objective that the participation rights it confers are to be construed.[85] Therefore, associations should be able to bring inter-temporal interests connected to the environment to the attention of the operators and public authorities when exercising their participation rights under the ELD.

Unfortunately, a 2017 study has shown that associations rarely use the remedies provided under the ELD, in part due to the limited reach of the ELD (as mentioned above, only 'significant adverse impacts' of certain types fall under its scope) and due to the barriers they face when accessing justice, including costs and the duration of proceedings (Fasoli E, 2017).

There are several reasons that effective public participation in remediation matters is critical for protecting inter-temporal interests. For one, remediation decisions need to be informed by local knowledge, often on a very small scale, such as possible sites for secondary remediation measures. The public often has knowledge that public authorities and courts need, including data that may contradict information provided by operators in their remediation plans. Public participation thus contributes to making decisions on remediation more effective at addressing environmental harm.

Moreover, participation is also critical to ensure procedural justice. When environmental associations represent inter-temporal interests, this allows children and future generations have a proxy seated at the table when decisions affecting their interests are made (Shrader-Frechette K, 2002). It is for these reasons that Shrader-Frechette calls for broader public participation, along with a primary role for scientific knowledge—what she calls "scientific proceduralism"—to guarantee procedural justice for future generations (Shrader-Frechette K, 2002: 27-28). This also circumvents the lack of standing on behalf of the rights of future generations, as set out by the German Supreme Court in *Neubauer*: the standing of these associations is based in the participation rights they enjoy, so it does not matter if the rights of future generations are not actionable *per se*.

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82. Article 13.

83. Judgment of the Court of 12 May 2011, *Trianel*, C-115/09, ECLI:EU:C:2011:289, § 40-41.

84. Commission Notice on Access to Justice in Environmental Matters. C(2017) 2616 final of 28 April 2017.

85. Preamble, § 7 and Article 1. See also Aarhus Convention Compliance Committee. Findings and recommendations with regard to communication ACCC/C/2013/91 concerning compliance by the United Kingdom of Great Britian and Northern Ireland, ECE/MP.PP/C.1/2017/14 of 24 July 2017: § 72.

Public interest participation of this sort is called for also in criminal proceedings. The proposed revision of the ECD, in fact, introduces participation rights within criminal proceedings. Noting that "nature cannot represent itself as a victim in criminal proceedings", the recitals of the proposed directive state that "for the purpose of effective enforcement[,] members of the public concerned, as defined in this Directive taking into account Articles 2(5) and 9(3) of the Aarhus Convention, should have the possibility to act on behalf of the environment as a public good, within the scope of the Member States' legal framework and subject to the relevant procedural rules." To this end, Article 14 of the proposal, entitled "Rights for the public concerned to participate in proceedings", provides that "Member States shall ensure that, in accordance with their national legal system, members of the public concerned have appropriate rights to participate in proceedings concerning offences referred to in Articles 3 and 4, for instance as a civil party."[86] While this provision recognizes the procedural autonomy of states, it also makes it clear that certain members of the public must be able to allowed to intervene in the interest of the environment.[87]

As in civil liability cases, there are good reasons that such participation is needed in criminal proceedings. If criminal judges are called upon to decide on remediation, they also need detailed, highly technical information about the impact of the crime and the affected territory. Specialized public agencies may provide data and expertise, yet these agencies can be removed from the situation on the ground: for example, in Italy, it is the central environmental ministry (Ministero della Transizione Ecologica) that intervenes on civil matters in criminal trials, not local authorities.[88] Including the public concerned as parties in criminal proceedings can ensure that judges have more information to supplement official reports.[89]

Public participation in decisions relating to remediation guarantees that persons representing inter-temporal interests may have a seat in court in order to promote the conservation of resources and options for the future, thus providing procedural justice for children and future generations.

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[86] This would present a notable challenge to the procedural framework of states—like Italy—where only the state may invoke the civil liability of persons accused of environmental crimes within criminal proceedings; see Study on the possibilities for non-governmental organisations promoting environmental protection to claim damages in relation to the environment in four selected countries - France, Italy, the Netherlands and Portugal (2017: 39-41).

[87] Although it is implicit that inter-temporal interests are included in standing on behalf of the environment, it may be helpful if the drafting of this provision better reflected the specific object of the Aarhus Convention in Article 1, that of protecting the "right of every person of present and future generations to live in an environment adequate to his or her health and well-being." For one, this would more explicitly acknowledge the role of environmental associations as defenders of inter-temporal interests connected to the environment.

[88] Article 311 of legislative decree n. 152 of 3 April 2006, upheld in Judgment of the Constitutional Court of Italy of 1 June 2016, n. 126.

[89] It is important that the public be granted party status, as this permits them to later appeal against remediation decisions on procedural or substantial grounds. See, *mutatis mutandis*, Judgment of the Court [GC] of 8 November 2016, *Lesoochranárske zoskupenie VLK*, C-243/15, ECLI:EU:C:2016:838, § 68-73.

4. Conclusions

As we've seen, when serious harm to the environment occurs, the effects can be long-lasting, depriving those who will inherit our world of opportunities and resources. This harm is contrary to inter-temporal interests and thus the value of solidarity, the principle of sustainable development, and the right to a healthy environment. Safeguarding inter-temporal interests requires public authorities and civil society to ensure that liability regimes are effective at preventing environmental damage and remediating it if it occurs. Therefore, even though the rights of future generations are still under development in Europe, inter-temporal public interests can and should guide the evolution of legal frameworks, their implementation and enforcement.

Our analysis suggests that more can be done to fully safeguard these interests in liability regimes. This would include improving the implementation of duties of remediation, coordinating remediation duties in civil and criminal liability regimes, expanding remediation within private liability claims, and ensuring that public authorities restore nature, but only as a last resort. Moreover, public participation in liability matters is critical to ensure that remediation decisions are fully informed and procedurally just, whether the matter is before a civil or criminal court.

One could argue that a pragmatic approach to future generations, as applied here, lacks ambition. Some would argue that a revolution is needed, not incremental change through legal reforms.[90] Rights of future generations and rights of nature have been embraced by some jurisdictions: shouldn't European states take a lesson, and give standing to their distressed rivers and forests and future citizens, to enforce their own rights? (Sharpston E, 2022) Instead, perhaps such a radical uprooting of established legal concepts such as legal personhood and standing is not necessary for progress to be made. It appears that this is the case in civil and criminal liability regimes, where existing public participation rights can even give standing for inter-temporal interests. Perhaps an interest-based analysis can be of value for other critical environmental matters, such as climate policy. Setting in place a legal framework that best prevents these crimes against the future from occurring, and that remediates potential harm to inter-temporal interests, is the least we can do to express solidarity with children and future generations.

[90] As argued by Malm A (2021).

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