

On Human(made) Nature: A Socio-Legal Conceptual Analysis of Nature Restoration in the North Sea

Rozemarijn Roland Holst^{*}  and Rembrandt Zegers^{**}

ABSTRACT

It has been suggested that the growing emphasis on nature restoration reflects a paradigm shift in environmental law and governance. Through a socio-legal analysis of the emerging concept of restoration in law and policy frameworks and in practice in the North Sea, this article reveals that no such shift is currently discernable. It shows that the underpinning conception of ‘nature’ has not changed in the law and governance of restoration, and that restoration thus runs into the same limitations as conventional approaches to conservation rooted in a hegemonic non-relational paradigm. This poses practical challenges for actors currently engaged in restoration initiatives and pre-empts alternative approaches, limiting the transformative potential of the restoration agenda. To overcome this, we propose that centring a relational approach opens up alternative ways of conceptualising and governing nature that are better aligned with the situated experiences, plural values and knowledges of people engaged in restoration practice.

KEYWORDS: marine nature restoration, conservation, marine biodiversity, socio-ecological systems, North Sea

1. INTRODUCTION

There is a growing emphasis on the need for nature restoration to complement existing conservation regimes to halt the global trend of ecosystem degradation and biodiversity loss. The focus of restoration efforts, and most of the experience gained thus far, has been on land and in certain coastal habitats.¹ Due to the complexities of the marine environment, nature restoration

^{*} Rozemarijn Roland Holst, Lecturer in International Environmental Law, University of Edinburgh, UK (r.rolandholst@ed.ac.uk).

^{**} Rembrandt Zegers, Independent psychosocial scholar and consultant, the Netherlands (rembrandtzegers5@gmail.com).

¹ See for a discussion Megan I Saunders and others, ‘Bright Spots in Coastal Marine Ecosystem Restoration’ (2020) 30 *Current Biology* R1500; BJ Richardson, ‘The Emerging Age of Ecological Restoration Law’ (2016) 25 *RECIEL* 277; Anastasia Telesetsky, An Cliquet and Afshin Akhtar-Khavari (eds), *Ecological Restoration in International Environmental Law* (Routledge 2016). The terms ‘restoration’ and ‘rewilding’ are sometimes used interchangeably, with ‘rewilding’ more commonly used in terrestrial, large ecosystem-scale contexts. Ecologically, these terms refer to distinct processes, see Johan T du Toit and Nathalie Pettoelli, ‘The Differences between Rewilding and Restoring an Ecologically Degraded Landscape’ (2019) 56 *Journal of Applied Ecology* 2467. We limit our analysis to the concept of restoration.

at sea (also ‘marine ecosystem restoration’)² has long been considered a less feasible option given the comparatively high practical failure rates and high costs involved.³ Yet, in recent years, attention is turning towards the open sea. The North Sea, one of the busiest seas in the world, is a case in point and a front runner especially when it comes to the demand for nature restoration in combination with the large ambition for and rapid expansion of offshore wind energy developments.⁴

While there is a growing body of research assessing the technological, ecological and economic potential of specific restoration interventions at sea,⁵ as well as some initial assessments of applicable regulatory frameworks and the current gaps therein,⁶ there has been little analysis of restoration as a concept and its integration into law and policy, nor of the assumptions and values underpinning the preferred approaches to restoration.⁷ Yet, it has been suggested that the inclusion of restoration objectives into law is indicative of an emerging ‘regenerative approach’ in environmental law that challenges conventional notions of conservation, and reflects a potential paradigm shift away from the sustainable development framework towards a more proactive approach that goes beyond merely preventing further ecosystem degradation.⁸ Policy documents similarly frame the restoration agenda as involving a ‘culture shift’, and a ‘transition of ideas’.⁹ In this article, we show that no such shift is currently discernible in the law and governance of marine ecosystem restoration in practice. We argue that recognising and constructively rethinking this is key if restoration efforts are to achieve their full potential and avoid the same pitfalls and limitations that current approaches to conservation are facing.

Governance models based on concepts such as ‘regeneration’ are often put forward as urgent antidotes to those premised on domination and extraction of nature. Dehm has argued that understanding these seemingly opposed governance models as dichotomous obscures how on a deeper level they share very similar assumptions and values.¹⁰ Both rely on anthropocentric justifications and assign instrumental values to nature: nature is to be used and/or conserved and restored in the interest of current and future generations of humans.¹¹ Both also reflect ‘epistemologies of mastery’ in the assumed right to control nature to use it and/or to protect, enhance and restore it.¹² Ultimately, both types of governance conceive nature as a resource to be exploited, the main difference being that restorative models moderate the drive to satisfy short-term needs with considerations for future generations’ needs and well-being.¹³ We

2 It should be noted that emerging restoration activities in the North Sea are not currently taking place on an ecosystem scale, see further Sections 2 and 3.

3 Brian R Silliman and others, ‘Editorial: Marine Ecosystem Restoration (MER)—A Call for a More Inclusive Paradigm’ (2023) 10 *Frontiers in Marine Science* 2; Elisa Bayraktarov and others, ‘The Cost and Feasibility of Marine Coastal Restoration’ (2016) 26 *Ecological Applications* 1055.

4 Juan Carlos Farias Pardo and others, ‘A Synthesis Review of Nature Positive Approaches and Coexistence in the Offshore Wind Industry’ (2023) *ICES Journal of Marine Science* fsad191.

5 *ibid*; Silliman and others (n 3).

6 Ana Mendes and others, ‘Towards a Legal Definition of Ecological Restoration: Reviewing International, European and Member States’ Case Law’ (2023) 32 *RECIEL* 3; Justine Bell-James, Rose Foster and Nicole Shumway, ‘The Permitting Process for Marine and Coastal Restoration: A Barrier to Achieving Global Restoration Targets?’ (2023) 5 *Conservation Science and Practice* e13050.

7 Exceptions not relating to the marine environment include Richardson (n 1); Benjamin J Richardson, ‘Restoring Layered Geographies: Ecology, Society and Time’ (2017) 26 *Griffith Law Review* 154; and in the more specific context of species reintroduction, Floor Fleurke, ‘Reintroduction of Large Carnivores in Europe: A Case Study on Frictions between Rules of Law and Rules of Nature’ (2024) 15 *Journal of Human Rights and the Environment* 56.

8 See, eg Christopher J Hilson and Annalisa Savaresi, ‘Regenerative Approaches and Environmental Law: Beyond Sustainability?’ in Josephine van Zeben and Chris Hilson (eds), *A Research Agenda for Environmental Law* (Edward Elgar 2025) 59.

9 See Section 2.

10 Julia Dehm, ‘Reconfiguring Environmental Governance in the Green Economy: Extraction, Stewardship and Natural Capital’ in Usha Natarajan and Julia Dehm (eds), *Locating Nature: Making and Unmaking International Law* (CUP 2022) 71.

11 Alexander Gillespie, *International Environmental Law, Policy, and Ethics* (2nd edn, OUP 2014) 13, 24.

12 Sam Adelman, ‘Epistemologies of Mastery’, *Research Handbook on Human Rights and the Environment* (Edward Elgar 2015) 9.

13 Dehm (n 10) 79.

follow Dehm in her observation that these two seemingly opposed models are becoming ever more intertwined in contemporary environmental governance, and that ‘uncovering the ways in which these two modalities of anthropocentric power over nature have become increasingly co-imbricated is essential for those seeking to contest contemporary human/nature relations and articulating new ways of living in and with the natural world’.¹⁴

In this article, we show that the drive towards restoration—and particularly the way in which it is pursued in the North Sea—is not only emblematic of this co-imbrication but goes even further. Rather than transitioning away from a ‘trade-off’ approach to managing extractive and highly impactful activities towards alternative, more reciprocal, ways of living with a spatially confined shared marine environment, there is at the same time a further intensification of uses *and* of restoration efforts. The latter thereby comes to serve as a justification of the former within the evolving ‘blue economy’. While some of our observations may hold true for restoration and environmental governance more broadly, we focus on the North Sea as an illustrative case study in which the dynamics we explore are intensified due to the high number of (conflicting) interests and agents involved, and the complex nature of this shared marine environment and its governance structures. The intensity of competing interactions in and with this marine space means that it cannot simply be ‘left alone’ to recover or restore, as is possible in certain contexts for restoration on land. It also means that pragmatism and strategic choices strongly inform restoration preferences and, more fundamentally, human conceptions of ‘nature’. This makes the North Sea a fruitful context in which to explore the concept of restoration from a relational perspective.

Our socio-legal analysis proceeds as follows. First, we trace the various conceptual iterations and justifications of ‘restoration’ that have emerged in law and policy frameworks (Section 2); and secondly, in practice (Section 3), with the aim of identifying the underpinning conceptions of ‘nature’ reflected therein. We show that this conception of nature has not fundamentally changed in the law and governance of restoration. It remains premised on the same, primarily non-relational, values as conventional approaches to conservation (Section 4). As a result, restoration runs into the same limitations—limiting its transformative potential and posing practical challenges for diverse actors engaging in restoration initiatives. Finally, we propose that adopting a relational perspective opens up alternative ways of conceptualising nature and points to a variety of corresponding governance and decision-making processes that are premised on the situated and relational character of interest, value and knowledge formation in relation to our environment (Section 5). It is beyond the scope of this article to develop alternative governance models in full. Instead, our aim is to show that a relational approach can provide a fruitful starting point for rethinking the legal and governance infrastructures of the restoration agenda in order to better align it with its broader ambitions, and thereby contribute to the paradigm and culture shift that is aspired to.

2. THE CONCEPT OF RESTORATION IN LAW AND POLICY

The concept of nature restoration is increasingly finding its way into law and policy instruments across different levels, where it broadly refers to passive or proactive interventions which aim to improve the ecological condition of an ecosystem or habitat. The emphasis on restoration in this broad sense is relatively new. In a legal context, the term ‘restoration’ was previously mostly used in a narrower sense as a form of redress in instances where there is legal responsibility and liability for environmental damage. For example, the International Court of Justice used the term ‘restoration’ in its finding in *Costa Rica v Nicaragua* that when natural recovery cannot

¹⁴ *ibid* 71.

return an environment to its pre-damaged state, 'active restoration measures' may be required in order to return the environment to its prior condition, in so far as that is possible.¹⁵ Similarly, the Convention on Biological Diversity (CBD) mentions restoration and compensation as examples of redress for damage to biodiversity.¹⁶ The broader use and understanding of the concept of restoration that is quickly gaining ground and that we are concerned with in the present article, is irrespective of questions of causality and (legal) responsibility for the causes of ecological damage and degradation.

The impetus for proactive nature restoration arises from the need to stem the global trend of further ecosystem and biodiversity decline, as well as pragmatic demands for complementarity and delivering co-benefits between different obligations and policy goals. When successful, restoration of (marine) ecosystems can enhance ecosystem-based adaptation to climate change, biodiversity, food security and human health in a mutually supportive manner.¹⁷ The growing number of regulatory and policy instruments that seek to promote restoration across international, regional and local levels all connect restoration in some way to the need for enhanced synergies and resilience. They acknowledge—implicitly or explicitly—that current approaches to conservation and preservation are falling short, and that different or 'additional' interventions are needed.

Below, we analyse the concept of restoration as reflected in relevant legal and policy frameworks across the global, regional and national levels that inform approaches to restoration in the North Sea. At the national level, it is distinct rationales and regulatory approaches to marine ecosystem restoration that we are interested in for the present purposes. Not all North Sea states have explicitly included restoration into law and policy frameworks (yet), and initiatives are at different (early) stages of development. We therefore draw primarily on examples from the Netherlands, England and Scotland, and do not purport to provide a comprehensive comparison of the applicable domestic law of all North Sea coastal states.

2.1 Global level

At the level of global policy, the UN General Assembly (UNGA) adopted the 2021–2030 UN Decade on Ecosystem Restoration with the goal to 'prevent, halt and reverse the degradation of ecosystems worldwide' by promoting initiatives with a 'dual focus' on protecting and restoring ecosystems.¹⁸ In this context, the term 'ecosystem restoration' broadly encompasses 'a wide continuum of activities that contribute to protecting intact ecosystems and repairing degraded ecosystems'.¹⁹ For each activity, the appropriate balance of conservation and restoration in a particular landscape is to be determined based on 'the local social, economic and ecological context'.²⁰ The overall goal of ecosystem restoration under the framework of the UN Decade is to increase the 'supply and quality of ecosystem services over time towards desired outcomes supporting national sustainable development priorities'.²¹ In the framing of the Decade, restoration is thus firmly embedded in the sustainable development paradigm and goals. The UNGA recognises ecosystem restoration as 'a complement to conservation activities and that priority should be given to conserving biodiversity and preventing the degradation of natural habitats and ecosystems by reducing pressures'.²² It stresses that ecosystem restoration and conservation

15 Certain Activities Carried Out by Nicaragua in the Border Area (*Costa Rica v. Nicaragua*) Compensation, Judgement, ICJ Reports 2018, 15, para 43.

16 CBD, art 14(2).

17 IPCC, Sixth Assessment Report, Summary for Policy Makers (2021) para C.3.6; IPCC Special Report on Oceans and the Cryosphere, Summary for Policy Makers (2019) para C.2.2.

18 UNGA Res 73/284, 1 March 2019; and The United Nations Decade on Ecosystem Restoration Strategy, at 1, available at: <<https://wedocs.unep.org/bitstream/handle/20.500.11822/31813/ERDStrat.pdf?sequence=1&isAllowed=y>>

19 The UN Decade on Ecosystem Restoration Strategy (n 18) at 1.

20 *ibid.*

21 *ibid.*

22 UNGA Res 73/284, 1 March 2019, at 5. Emphasis added.

contribute to the implementation of the Sustainable Development Goals (SDGs) and multi-lateral environmental agreements, including the Paris Agreement and the Kunming-Montreal Global Biodiversity Framework adopted under the CBD.

The Decade seeks to facilitate this by promoting a ‘values-based imperative’ for managing ecosystems that are expected to ‘complement existing belief systems and to focus on the positive effects of ecosystem conservation and restoration on the well-being of individuals globally, eg a *rediscovered relationship with nature*.’²³ The strategy posits that ‘once societies fully adopt the principle that all individuals have the right to enjoy the benefits of healthy ecosystems in their local environments, major investments in ecosystem restoration are likely to become common rather than occasional.’²⁴ Recent iterations of the strategy ‘celebrate a *culture of restoration*’ and frame the shift from ‘plundering the planet to healing it’ as a ‘cultural challenge.’²⁵ This framing clearly has transformational ambitions, yet it is still notably anthropocentric and individualistic—centring (individual) rights rather than responsibilities as an incentive for investment, and the benefits of conservation and restoration for humans, rather than non-instrumental or relational values. The cultural perspective articulated here is furthermore a notably Western and rights-based one.²⁶

The framing of restoration as a transformative approach is echoed in other instruments. Under the CBD, the Kunming-Montreal Global Biodiversity Framework (GBF) is built around:²⁷

[a] theory of change which recognizes that urgent policy action is required globally, regionally and nationally to achieve sustainable development so that the drivers of undesirable change that have exacerbated biodiversity loss will be reduced and/or reversed to allow for the recovery of all ecosystems and to achieve the Convention’s vision of living in harmony with nature by 2050.

The vision of the GBF is that of ‘a world of living in harmony with nature where by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.’²⁸ One of the key targets set out in the GBF is that by 2030 at least 30% of degraded (marine) ecosystems will be under effective restoration.²⁹

While the targets of the GBF set out an important political commitment and direction of travel, they are not legally binding and leave member states ample leeway to adopt and devise their own national biodiversity strategies and action plans. The CBD itself does not impose binding restoration obligations, it only mentions restoration of degraded ecosystems as an example of in-situ conservation measures that each state party shall take ‘as far as possible and as appropriate.’³⁰ As a set of policy goals intended to guide the implementation of states’ obligations under the CBD, the GBF is no different in nature from its predecessor, the Aichi Targets.³¹ While progress was made under the Aichi framework, none of its 20 targets were ultimately met by 2020, including quantified targets to conserve 17% of all land and inland waters and 10% of the ocean.³² It is unclear how and to what extent the new emphasis on restoration in the GBF

23 The UN Decade on Ecosystem Restoration Strategy (n 18) at 11. Emphasis added.

24 *ibid* at 11.

25 See para 8 at <<https://www.decadeonrestoration.org/strategy>> accessed 1 March 2025, emphasis added.

26 See further Section 5.

27 CBD/COP/DEC/15/4, 19 December 2022, Annex, para 9.

28 *ibid* para 10.

29 *ibid* target 2.

30 CBD, art 8(f).

31 See for a discussion of the use of targets Stuart R Harrop and Diana J Pritchard, ‘A Hard Instrument Goes Soft: The Implications of the Convention on Biological Diversity’s Current Trajectory’ (2011) 21 *Global Environmental Change* 474.

32 Secretariat of the CBD, ‘Global Biodiversity Outlook 5’ (2020) available at: <<https://www.cbd.int/gbo/gbo5/publication/gbo-5-spm-en.pdf>> accessed 1 March 2025. This was despite additional efforts, such as the ‘Ecosystem restoration short-term action plan’ adopted by the CBD COP in 2016, CBD COP DEC/XIII/5, 10 December 2016.

denotes an approach that is fundamentally different from or truly additional to the approach to biodiversity conservation and sustainable use thus far, which has clearly fallen short of reaching agreed targets.

The global policy goals outlined above include and extend to marine ecosystems. The new Agreement on the Conservation and Sustainable Use of Biodiversity Beyond National Jurisdiction (BBNJ Agreement) provides an additional legal iteration thereof specifically for marine biodiversity, although it is limited in scope to areas beyond national jurisdiction. The BBNJ Agreement stipulates a general ‘approach that builds ecosystem resilience [...] and also maintains and restores ecosystem integrity [...]’.³³ Area-based management tools, such as marine protected areas, established in accordance with the Agreement should aim, inter alia, to ‘protect, preserve, restore and maintain biological diversity and ecosystems, including with a view to enhancing their productivity and health, and strengthen resilience to stressors, including those related to climate change, ocean acidification and marine pollution’, and to ‘support food security and other socioeconomic objectives, including the protection of cultural values’.³⁴ An emphasis on resilience and synergies with climate change and food security is again apparent in the Agreement’s approach to restoration. It remains to be seen when the Agreement enters into force what concrete restoration measures on the high seas might look like.

2.2 Regional level

At the regional level, the EU’s new Nature Restoration Regulation (commonly referred to as the ‘Nature Restoration Law’ or NRL) is the first instrument to set out legally binding nature restoration obligations and targets for terrestrial and marine ecosystems. First proposed in 2022 as a key part of the EU’s Biodiversity Strategy for 2030, the proposal was initially well received but then came under attack from lobby groups for the agriculture, forestry and fisheries sectors who almost derailed the negotiation process of the NRL altogether.³⁵ The European Parliament (EP) eventually adopted a heavily amended and compromised version of the NRL proposal in February 2024.³⁶ After several member states subsequently withdrew support, it was taken off the agenda for the Council’s final approval vote in March 2024. In a tumultuous last-minute attempt to get it over the line, the Council adopted the NRL in June 2024.³⁷

The NRL sets out binding restoration targets for specific habitats and species and requires member states to adopt restoration measures jointly covering at least 20% of EU land and sea areas by 2030, and all ecosystems in need of restoration by 2050.³⁸ It defines ‘restoration’ as:³⁹

the process of *actively or passively* assisting the recovery of an ecosystem in order to improve its structure and functions, with the aim of conserving or enhancing biodiversity and ecosystem resilience, through improving an area of a habitat type to good condition, re-establishing favourable reference area, and improving a habitat of a species to sufficient quality and quantity in accordance with Article 4(1), (2) and (3) and Article 5(1), (2) and (3), and meeting the targets and fulfilling the obligations under Articles 8 to 12, including reaching satisfactory levels for the indicators referred to in Articles 8 to 12.

33 2023 Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ Agreement), art 7(h).

34 *ibid* art 17(c) and (d).

35 For a discussion, see An Cliquet and others, ‘The Negotiation Process of the EU Nature Restoration Law Proposal: Bringing Nature Back in Europe against the Backdrop of Political Turmoil?’ (2024) 32 *Restoration Ecology* e14158; Niels Hoek, ‘Addressing Legal Myths about the Proposed EU Nature Restoration Law’, *Vervassingsblog* (23 June 2023).

36 European Parliament legislative resolution of 27 February 2024 on the proposal for a regulation of the European Parliament and of the Council on nature restoration, (COM/2022/304—C9-0208/2022—2022/0195(COD)).

37 Regulation (EU) 2024/1991 of 24 June 2024 on Nature Restoration and Amending Regulation (EU) 2022/869.

38 *ibid* art 1(2).

39 *ibid* art 3(3). Emphasis added.

The NRL includes a dedicated article on the restoration of marine ecosystems, setting out quantitative targets and timelines for the restoration of particular marine habitat types.⁴⁰ There are furthermore quantified and time-bound ‘additionality’ requirements for restoration measures aiming to re-establish certain habitat types,⁴¹ as well as obligations of continuous improvement and non-deterioration.⁴² The latter are not absolute, however, and notable exceptions include ‘a plan or project of overriding public interest for which no less damaging alternative solutions are available.’⁴³ An explicit exemption is provided for the planning, construction and operation of renewable energy projects, which are legally presumed to be in the overriding public interest, and member states can exempt them from the requirement that no less damaging alternative solutions are available.⁴⁴

These provisions mirror the ‘trade-off logic’ that is also reflected in pre-existing EU conservation law.⁴⁵ Competent authorities have the discretion to weigh up conservation interests with other interests, and economic activities are not precluded from areas under conservation or restoration. However, as Pieraccini points out, the interests involved in this trade-off are presumed to be a given and pre-exist in the decision-making space, rather than *resulting* therefrom through a process of collective deliberation and interest formation.⁴⁶ This deference to what she describes as ‘aggregate decision-making’ fails to account for the situated, collective and relational character of interest, value and knowledge production in relation to nature.⁴⁷ It also explains why particular interests and interests groups tend to be overriding in conservation decision-making almost by default. The practical result is that current levels of protection in 86% of EU marine protected areas (MPAs) are low or incompatible with conservation objectives, according to a recent study.⁴⁸ The study concluded that the EU MPA network is likely to provide limited ecological outcomes, and that reaching protection targets will require radical changes to the regulation of harmful activities in MPAs, as well as institutional and cultural change.⁴⁹

The NRL alone is unlikely to inspire such radical change. As noted above, it does not fundamentally depart in its approach or legislative rationale from the existing body of EU conservation law, although its aims are explicitly ‘additional’ thereto. The EP observed that restoration measures for habitats and species protected under the Habitats Directive and Birds Directive can also be based on those frameworks, but that ‘such restoration will not be enough to reverse biodiversity loss and for all ecosystems to recover’ and that ‘additional obligations should be established’ based on specific indicators.⁵⁰ The NRL is broader in scope in that it seeks to achieve both biodiversity and climate mitigation and adaptation objectives (ie realise co-benefits).⁵¹ For the marine environment specifically, it complements the Marine Strategy Framework Directive (MSF Directive) which strives to achieve ‘good environmental status’ in the marine environment.⁵² Member states are obliged to adopt marine strategies to protect and preserve the marine

40 *ibid* art 5 (1, 2 and 5).

41 *ibid* art 5 (2 and 3).

42 *ibid* art 5(9).

43 *ibid* art 5(11)(c). Within Natura 2000 sites, deterioration can furthermore be justified if it is caused by a plan or project authorised in accordance with art 6(4) of the Habitats Directive 92/43/EEC.

44 On the condition that a strategic environmental assessment and an environmental impact assessment have been carried out, see NRL, art 6.

45 For example, art 6(4) of the Habitats Directive. See on the trade-off logic more extensively Margherita Pieraccini, ‘The Public Interest in Environmental Decision-Making: A Pragmatist Turn’ (2024) 37 JEL (advance access).

46 *ibid* 14, drawing on Fisher’s distinction between ‘rational-instrumental’ and ‘deliberative-constitutive’ administrative constitutionalism; Elizabeth Fisher, *Risk Regulation and Administrative Constitutionalism* (Hart 2007).

47 See further Section 4. For an exploration of these limitations in the context of the Habitats Directive, Pieraccini (n 45).

48 Juliette Aminian-Biquet and others, ‘Over 80% of the European Union’s Marine Protected Area Only Marginally Regulates Human Activities’ (2024) 7 One Earth 1614.

49 *ibid*.

50 European Parliament legislative resolution of 27 February 2024 on the proposal for a regulation of the European Parliament and of the Council on nature restoration, para 25.

51 NRL, art 1(1)(a) and (b).

52 Directive 2008/56/EC of 17 June 2008 establishing a framework for community action in the field of marine environmental policy.

environment, prevent deterioration, or ‘where practicable, restore marine ecosystems in areas where they have been adversely affected’.⁵³ The MSF Directive thus recognises restoration as a possible measure but does not provide further substance on what such measures may look like or when they are appropriate.⁵⁴ This is where the NRL adds further detail.

The NRL’s approach is clearly instrumentalist and relies heavily on quantification. Restoration measures are intended to ‘deliver a concrete and measurable improvement in the condition of the ecosystems’.⁵⁵ The NRL prioritises particular habitat types and existing Natura 2000 sites, and once good condition is achieved, measures shall be taken to ensure that this does not ‘significantly’ deteriorate.⁵⁶ At the same time, the continuous improvement and no-significant-deterioration obligations are obligations of conduct, rather than obligations of result, which is difficult to square with the ‘concrete and measurable improvement’ rationale.⁵⁷

With the many carve-outs of legal obligations and compromises in the finally adopted NRL text, member states enjoy significant discretion to determine their own restoration measures and priorities through National Restoration Plans. This makes it the more remarkable that the lobby against the NLR claimed that it was pitted directly against the interests of specific stakeholders, notably farmers, landowners (foresters) and fishers who made unfounded claims that the NLR would result in infringements of their rights, high societal costs, threats to food security and a loss of jobs.⁵⁸ These objections, presented as political counter-arguments, deny scientific evidence to the contrary and find no support in the wording of the NRL text. EU institutions, other organisations and businesses have sought to debunk these statements,⁵⁹ and in several open letters, the scientific community sought to counter the miss-information by explaining why nature restoration is not ‘only’ about tackling biodiversity loss and climate change, but necessary precisely to safeguard ecosystem productivity (including agriculture, aquaculture and fisheries) in the long run.⁶⁰ The failure to build political and stakeholder coalitions that include those with powerful, short-term vested interests shows how challenging it remains to realise a restoration agenda—even when it supports the longer-term interests of those same stakeholders in enhanced ecosystem resilience and productivity. This challenge has not been resolved with the adoption of the NRL and will continue to play out at the domestic level in the development and implementation of national restoration plans.

For both EU member states and non-EU North Sea coastal states, another regional legal framework that seeks to achieve good environmental status is the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR). In addition to a suite of pollution prevention, protection and conservation measures, the OSPAR Commission Strategy for 2030 also includes the strategic objective to restore degraded benthic habitats in the North-East Atlantic when practicable to safeguard their ecosystem functions and resilience to climate change and ocean acidification. OSPAR aims to develop a regional approach by 2025, including qualitative and/or quantitative targets for restoration, as well as a common knowledge base on the most appropriate and effective methods for the restoration of degraded habitats.⁶¹ Despite

53 *ibid* art 1.

54 The MSF Directive appears to refer to the narrower (and older) concept of restoration in environmental management as a mitigation and remediation tool, see eg *ibid* art 13 and Annex VI sub 7.

55 EP legislative resolution (n 50) para 32.

56 NRL, art 5 (9–13).

57 The EP notes that ‘not achieving those outcomes does not imply a failure to comply with the obligation to put in place measures suitable for reaching those outcomes’, EP legislative resolution (n 48) para 37.

58 Cliquet and others (n 35); Hoek (n 35).

59 See for a discussion Cliquet and others (n 35).

60 See, eg Open letter signed by over 6,000 scientists. Scientists support the EU’s Green Deal and reject the unjustified argument against the Sustainable Use Regulation and the Nature Restoration Law, 13 June 2023, available at: <<https://zenodo.org/records/8128624>>; Crowtherlab, Letter from scientists about the EU restoration law, available at: <<https://crowtherlab.com/letter-from-scientists-about-the-eu-restoration-law/>> accessed 1 March 2025.

61 Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2030, OSPAR 21/13/1, Annex 22, Strategic Objective 6.

ongoing conservation and management efforts, the overall trend in the OSPAR Maritime Area regrettably aligns with global trends and is one of declining biodiversity and continued habitat degradation. It is recognised that additional measures are required to change the trajectory of nature decline to one of nature recovery, and this may include restoration measures.⁶²

2.3 National level

At the national level, marine nature restoration objectives also feature explicitly in the policies and marine spatial planning frameworks of several North Sea states. For EU member states, this may in part be in anticipation of the NRL coming into force. How different member states will go about implementing the NLR in practice remains to be seen, however. While all North Sea states align their policies with global goals, including the GBF, distinct approaches and priorities for restoration at sea can already be discerned for those states who have started to incorporate the concept into law and policy. We will compare three different sets of approaches: (i) no net loss and offsetting, (ii) net gain and (iii) nature enhancement.

2.3.1 No net loss and offsetting

The first approach is to extend methodologies that are already widely applied to regulate the environmental impacts of developments on land as part of the mitigation hierarchy to activities in the marine environment.⁶³ Requirements for biodiversity ‘offsetting’ or ‘no net loss’ are examples thereof, which may include restoration measures. In Germany, for example, the negative environmental impacts of coastal and offshore construction projects need to be either compensated for or offset elsewhere,⁶⁴ and similar requirements for ‘replacement nature’ are being discussed in Denmark.⁶⁵ No net loss and offsetting requirements typically apply only at a project level for certain types of developments and are not without practical and implementation challenges. This approach has been questioned for its challenges in effectively monitoring (cumulative) impacts and quantifying equivalences (‘like for like’) of proposed offsets or restoration measures.⁶⁶

2.3.2 Net gain

A second approach, based on the concept of ‘biodiversity net gain’ (BNG), goes one step further than ‘no net loss’ in its aim to leave biodiversity in measurably better state than before the development took place. It is still rooted in the logic of the mitigation hierarchy but seeks to ‘reinforce’ and ‘complement’ it.⁶⁷ The net gain approach entails ‘protecting, restoring, or creating environmental features that are of greater ecological value to wildlife, habitats and people than any losses associated with the new development.’⁶⁸ In England, BNG is already a legal requirement for certain development projects on land,⁶⁹ and work is ongoing to extend the concept of

62 OSPAR Quality Status Report 2023, Synthesis Report, available at: <<https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/>> accessed 1 March 2025.

63 The mitigation hierarchy requires avoidance, mitigation or compensation—in that hierarchical order—for negative environmental impacts arising from a development project.

64 Federal Nature Conservation Act (Bundesnaturschutzgesetz) para 13.

65 Anders Erichsen, ‘Denmark Will Be Busy Restoring Nature at Sea’, *DHI Blog* (September 2023).

66 Anne-Charlotte Vaissière and others, ‘Biodiversity Offsets for Offshore Wind Farm Projects: The Current Situation in Europe’ (2014) 48 *Marine Policy* 172; Laura Florentina Guşatu and others, ‘Spatial and Temporal Analysis of Cumulative Environmental Effects of Offshore Wind Farms in the North Sea Basin’ (2021) 11 *Scientific Reports* 10125. See also Section 4.

67 Natural England, ‘Biodiversity Net Gain: An Introduction to the Benefits’, available at: <https://naturalengland.blog.gov.uk/wp-content/uploads/sites/183/2022/04/BNG-Brochure_Final_Compressed-002.pdf> accessed 1 March 2025.

68 Department for Environment, Food and Rural Affairs (Defra), Consultation on the principles of marine net gain (7 June 2022) at 5, available at: <https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-the-principles-of-marine-net-gain/supporting_documents/Consultation%20on%20the%20Principles%20of%20Marine%20Net%20Gain.pdf> accessed 1 March 2025.

69 Town and Country Planning Act 1990, Schedule 7A, as inserted by Schedule 14 of the Environment Act 2021.

Marine Net Gain (MNG) to developments at sea. This includes the development of an MNG assessment framework through which the value of an MNG intervention is to be measured in terms of its benefits towards relevant environmental features. Where the overall benefits of an intervention exceed the residual losses associated with the project, a 'net gain' is achieved.⁷⁰

The draft MNG policy for England intends to take a 'nature first' approach, which prioritises net gain for biodiversity and measures the residual impacts of a development in terms of biodiversity losses. MNG and BNG are both narrower concepts than 'environmental net gain', which may encompass a wider range of social, ecological and economic values beyond biodiversity alone. The aim is that MNG will expand on BNG and incorporate some—what the UK government has referred to as—'secondary considerations' such as climate change resilience, flood protection or cultural ecosystem services, but only where such 'extra benefits are ultimately underpinned by biodiversity protection'.⁷¹ The reasoning is that all social, environmental and economic values of natural capital are ultimately underpinned by biodiversity.⁷² This simplified and narrow understanding of 'nature' as biodiversity and the strategic prioritisation thereof in the draft MNG policy is not universally subscribed too, as is evident from several stakeholder surveys.⁷³ MNG is furthermore not intended to comprehensively apply to all activities in the marine environment, notably fisheries and aquaculture will be excluded.⁷⁴

The MNG assessment framework will rely on a system to quantify 'gain', either through a contributions-based approach (ie a levy) or a biodiversity metric, or a combination of the two.⁷⁵ Either way, the principle of 'additionality' will be crucial and particularly challenging to implement and monitor effectively.⁷⁶ MNG interventions can namely be site-based (replacing or restoring impacted features near the development) or 'strategic', meaning that interventions can be decoupled from the development location—and thereby from the local ecology, communities and stakeholders—in order to deliver general marine protection priorities while ensuring flexibility and 'maximum environmental returns'.⁷⁷ This raises a number of practical and conceptual questions associated with natural capital accounting methods, to which we shall return in Section 4.

2.3.3. *Nature enhancement*

A third set of approaches can be captured under the umbrella of nature or habitat 'enhancement'. This is where the terminology used to describe various interventions gets confusing and is often used interchangeably by different actors. The Scottish government agency NatureScot is the only one to have produced some guidance on how they understand and apply the various terms for interventions aimed at nature enhancement in the marine environment. NatureScot notes that the term 'habitat enhancement' is most commonly used as an umbrella term for various regeneration, recovery and restoration actions that aim to improve the quality, size or distribution of

⁷⁰ Defra (n 68) at 6.

⁷¹ Non-biodiversity impacts will be second-order considerations to distinguish between two interventions of 'equivalent biodiversity value', see *ibid* at 12; and Defra, Government Response to Consultation on the principles of marine net gain, 9 December 2023, available at: <<https://www.gov.uk/government/consultations/consultation-on-the-principles-of-marine-net-gain/outcome/government-response>> accessed 1 March 2025.

⁷² Defra (n 68) 12.

⁷³ Summary of Responses (9 December 2023) available at: <<https://www.gov.uk/government/consultations/consultation-on-the-principles-of-marine-net-gain/outcome/summary-of-responses#section-5-marine-net-gain-and-additionality-in-marine-protected-areas>> accessed 1 March 2025; Andrew Edwards-Jones and others, 'Stakeholder Insights into Embedding Marine Net Gain for Offshore Wind Farm Planning and Delivery' (2024) 14 *Environmental Challenges* 100814.

⁷⁴ Defra, Government Response (n 73) Part 2.

⁷⁵ The government has proposed to prioritise a contributions-based approach, as this is easier to realise in the short term, see Defra (n 68) at 14; and Defra, Government Response (n 73) Part 1.

⁷⁶ Some respondents to the Defra consultation were concerned that allowing improvements to existing MPAs to count as MNG measures could weaken or replace existing statutory obligations to effectively manage MPAs, see Defra (n 68) at 27; Defra, Government Response (n 73) Part 5.

⁷⁷ Defra (n 68) at 22; Summary of Responses (n 73) Section 5.

a habitat.⁷⁸ In order of increasing level of intervention involved, they distinguish the following enhancement activities: habitat recovery (passive approach that includes removing pressures to allow a habitat to recover naturally); habitat regeneration (low level of intervention alongside pressure reduction measures);⁷⁹ habitat restoration (high level of intervention, eg rebuilding a habitat or reintroducing species to help (re)establish a habitat in a location where it could not occur without assistance) and habitat creation (using ‘natural’ approaches and substrata or placing artificial structures to create a habitat in a place where it was not previously present, for example, in an offshore windfarm).⁸⁰

The Scottish National Marine Plan uses the term ‘enhancement’ for a range of objectives, including in the management of existing MPAs, or more broadly to enhance biodiversity and ecosystem services, coastal protection, resilience and carbon sequestration.⁸¹ For offshore development activities specifically, enhancement describes any interventions that developers do in addition to mitigation and compensation requirements. Scotland also explicitly recognises the broader role of habitat enhancement in the context of ‘nature-based solutions’, noting that the climate emergency and the GBF provide further drivers for enhancement and restoration action.⁸²

As for the preferred type of enhancement activity, NatureScot suggests that the introduction of artificial hard substrates may not be the best option, as there are few circumstances in Scottish waters where artificial habitat creation, such as artificial reefs, can be justified based on biodiversity conservation objectives.⁸³ Habitat creation through the placement of artificial structures is often promoted for its reef effect. While NatureScot acknowledges that some species do aggregate around and colonise such structures, they emphasise the speculative population-level benefits of artificial structures and the risks of such structures acting as stepping stones for invasive species.⁸⁴ This can be contrasted with the Netherlands, where restoration activities are strongly focused on habitat creation through the introduction of hard substrates. In the Netherlands’ territorial sea and exclusive economic zone (EEZ)—a particularly busy part of the North Sea—space is at a premium. As spatial priority is given to offshore wind developments, the inevitable introduction of hard substrates in the form of monopiles and scour protection thus dictates restoration choices and priorities, as we shall see in more detail in Section 3. By comparison, the Danish Centre for Marine Nature Restoration, who work to build a knowledgebase for marine restoration, would not even classify the creation of reefs where they did not previously exist as ‘nature restoration.’⁸⁵ They apply the same reasoning to mussel and seaweed farms, which may have positive environmental effects, but are not ‘natural habitats’ and therefore not considered

78 NatureScot, Information Note—Marine Habitat Enhancement, Recovery, Restoration and Creation in Scotland: Terminology and Examples, available at: <<https://www.nature.scot/doc/information-note-marine-habitat-enhancement-recovery-restoration-and-creation-scotland-terminology>> accessed 1 March 2025.

79 Interestingly, NatureScot observes that in contexts where enhancement activities take place in areas where there is active fishing, for example, the term ‘regeneration’ may be less controversial than ‘recovery’ and ‘may better convey the implication of both potential environmental and socio-economic benefits of engagement with the process to stakeholders’, see *ibid*.

80 The distinction between habitat restoration/creation and species reintroduction arguably blurs when ecosystem engineers such as oysters are introduced to (re)establish a habitat.

81 The Scottish Government, Scotland’s National Marine Plan (2015), available at: <<https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2015/03/scotlands-national-marine-plan/documents/00475466-pdf/00475466-pdf/govscot%3Adocument/00475466.pdf>> accessed 1 March 2025. An update to the National Marine Plan is currently under development, which will pay specific attention to the impacts of climate change and human activity on the marine environment. The development of a marine and coastal restoration plan is also underway as one of the actions set out in the Scottish Biodiversity Delivery plan 2024–2030, available at: <<https://www.gov.scot/publications/scottish-biodiversity-delivery-plan-20242030/>> accessed 1 March 2025.

82 NatureScot (n 78).

83 *ibid* para iv.

84 *ibid* para iv. See on uncertainty around benefits and risks also Pardo and others (n 4).

85 Jens K Petersen and others, ‘Concepts in Relation to Marine Nature Restoration’ (The Danish Center for Marine Restoration 2023), available at: <<https://orbit.dtu.dk/en/publications/concepts-in-relation-to-marine-nature-restoration>> accessed 1 March 2025.

nature restoration. According to the Centre, 'not all activities with positive environmental and/or nature enhancement characteristics are in themselves marine nature restoration'.⁸⁶ The Centre understands nature restoration more narrowly as the 're-establishment of lost habitats where they had known occurrence or of lost species in their natural historical distribution area and densities'.⁸⁷

The Dutch North Sea policy takes a clear nature enhancement approach, although it appears to use the terms 'restoration' and 'nature enhancement' interchangeably. Its approach is premised on the observation that 'the desire for restoration and maintenance comes at a time when the North Sea is generally regarded as an area which can be used much more intensively: for expansion of existing social and economic interests and particularly for a contribution to the energy transition'.⁸⁸ The policy recognises that the current ecological status of the North Sea is 'worrying' and that 'the marine ecosystem already needs restoration', hence 'increasing use is therefore only responsible with restoration and maintenance of the North Sea ecosystem'.⁸⁹ In this connection, it refers to the concept of the 'ecological carrying capacity' of the North Sea as 'a limiting condition for individual and cumulative use'.⁹⁰ A direct tension becomes apparent between these three statements: (i) the concept of carrying capacity as a 'limiting condition', (ii) the current dire environmental status of the North Sea (ie indicating that it is at, or exceeding, carrying capacity) and (iii) the objective of further intensified use. In the framing of the policy, nature restoration becomes the silver bullet that seemingly resolves this tension and contributes to 'a sustainable profile of the Dutch blue economy'.⁹¹

The Dutch marine policy is framed in terms of three 'transitions': the energy transition, the nature transition and the food transition, which are interconnected and rely on multifunctional use of space.⁹² The policy posits that the nature transition 'also requires a *transition in our ideas* about marine ecosystems', for example, that 'objects and installations create new habitats and can contribute to nature'.⁹³ While the nature transition also relies on conventional pressure reduction, mitigation and compensation requirements for development activities, the policy stresses that it 'is important to not only consider the pressure factors of the activities, objects and installations but also the potential *contributions to nature*, including new habitats'.⁹⁴ In the Dutch part of the North Sea, the approach to nature enhancement is thus clearly dictated by the spatial priority accorded to offshore energy developments. The demands of the nature and food transitions, whether that is habitat restoration, the changing nature and reduced size of capture fisheries, aquaculture opportunities or space for safe maritime transport, all have to be managed in terms of 'multi-use' of limited space (sometimes also referred to as 'co-use' or 'coexistence').⁹⁵ This has important implications for how the concept of restoration is operationalised in practice and who participates therein, as we will discuss in the next section.

3. THE CONCEPT OF RESTORATION IN PRACTICE

The approaches to restoration as reflected in the domestic law and policies discussed above, are shaped by a different set of pragmatic priorities and choices in each jurisdiction. These policy choices steer and sometimes limit the options available to those engaging in restoration projects.

86 ibid 5.

87 ibid 6.

88 Government of the Netherlands, North Sea Programme 2022–2027, p 30, available at: <<https://www.noordzeeloket.nl/en/policy/north-sea-programme-2022-2027>> accessed 1 March 2025.

89 ibid at 27.

90 ibid.

91 ibid at 91.

92 North Sea Programme (n 88) at 27.

93 ibid at 27. Emphasis added.

94 ibid at 33. Emphasis added.

95 ibid at 57, 61.

In this section, we explore how the concept of restoration and the various approaches thereto are operationalised in practice. Again, our aim is not to provide a comprehensive comparison of practice across all North Sea states, but to identify several key factors shaping the practice of restoration: (i) strategic choices and preferred approaches, (ii) the role of networks of restoration practitioners, (iii) the dynamics of the marine environment and (iv) regulatory hurdles and procedural limitations. To illustrate these, our conceptual analysis draws on personal observations and engagements of the authors with restoration initiatives primarily in the Netherlands, where both marine restoration policy and practice are relatively developed.

3.1 Strategic choices and preferred approaches

As discussed above, there are different ways to approach restoration objectives, each involving different levels of human intervention. The first question is whether a more passive or proactive approach to restoration is to be preferred. The Dutch policy clearly favours habitat creation using artificial structures over more passive nature recovery, in contrast to the Scottish approach. Yet, even within the spatial and infrastructural confines of a windfarm, this preference for habitat creation is not immediately self-evident. With the expansion of offshore windfarms, larger-scale capture fisheries are forced to move out of these areas. In fact, the Dutch North Sea fisheries sector is shrinking drastically because of this. Windfarms effectively become new no-take zones in which the pressures from bottom trawling are removed. While other types of pressures may be introduced, the reduced disturbance of the seabed alone can generate net positive effects on a range of habitats and species that get a chance to recover.⁹⁶

A second and related question that informs restoration choices is which environmental baseline (historic reference condition) is implicitly or explicitly relied on. Environmental baselines are notoriously difficult to determine, partly due to knowledge and data gaps, but also because perceptions of what constitutes a previous ‘natural’ state (if there is such a thing) shift over time and are different for each generation—the so-called ‘shifting baseline syndrome’.⁹⁷ Restoration law and policy avoids this conundrum by simply aiming for an ‘improved’ condition compared to a previously degraded state (ie not a return to any specific historic condition), but the question remains valid to the extent that (expert) opinions may differ on the variables, methodologies, sources of knowledge and interests that together inform the choice of one restoration measure and ‘improvement’ goal over another.⁹⁸ Transparency and insight into these choices would not only be beneficial from a governance point of view, but also instrumental in ensuring the long-term success of restoration efforts.

Despite the absence of the formal use of baselines, historic conditions nevertheless inform restoration choices. The North Sea has changed profoundly over the course of centuries because of a combination of human activity and natural processes. In the Dutch part of the North Sea, this notably includes the loss of hard structures such as rocks and extensive oyster beds. The constant disturbance of what is now mostly a sandy soft-bottom habitat makes it difficult for species to settle there again.⁹⁹ The Dutch Marine Strategy formulates the target of a ‘return and recovery of biogenic reefs’.¹⁰⁰ There is an implicit preference for the restoration of hard substrate

⁹⁶ Pardo and others (n 4) 9; Matthew C Ashley, Stephen C Mangi and Lynda D Rodwell, ‘The Potential of Offshore Windfarms to Act as Marine Protected Areas—A Systematic Review of Current Evidence’ (2014) 45 *Marine Policy* 301.

⁹⁷ Masashi Soga and Kevin J Gaston, ‘Shifting Baseline Syndrome: Causes, Consequences, and Implications’ (2018) 16 *Frontiers in Ecology and the Environment* 222.

⁹⁸ In the preparation of national restoration plans under the NRL, and the broad 70-year reference period that was contained in earlier drafts was ultimately removed, as a result of which member states may use non-science-based reference periods and have leeway to adopt widely varying interpretations. See for a discussion also Cliquet and others (n 35).

⁹⁹ Hein Sas and others, ‘Recommendations for Flat Oyster Restoration in the North Sea’ (2019), available at: <<https://research.wur.nl/en/publications/recommendations-for-flat-oyster-restoration-in-the-north-sea>> accessed 1 March 2025.

¹⁰⁰ Marine Strategy for the Dutch part of the North Sea 2022–2027 (part 3), environmental target D6T5, available at: <<https://www.noordzeeloket.nl/publicat/pag/202036/marine-strategy-for-the-dutch-section-of-the-north-sea-2022-2027-part-3.pdf>> accessed 1 March 2025. Emphasis added.

habitats over sandy habitats, presumably because the net benefits are assumed to be higher. Established oyster reefs, for example, are higher in biodiversity than sandy habitats and support other ecosystem services by filtering water, providing nutrients and shelter and possibly enhancing carbon storage.¹⁰¹ In practical terms, this preference means that two types of restoration interventions are actively pursued in the Netherlands. First, nature-inclusive design and construction requirements to enhance the artificial reef function of monopiles are incorporated early on in the design of new windfarms as part of the tender procedure.¹⁰² Second, there are trails for the placement of structures seeded with native oysters or mussels onto the seafloor and infrastructure of existing windfarms.¹⁰³ Both types of activities rely on an evolving network of practitioners who shape the practice of restoration.

3.2 Networks of restoration practitioners

Networks of professionals involved in the practice of nature restoration at sea include the ‘usual suspects’—experts, scientists, consultants, including university marine research departments who participate in partnerships undertaking marine restoration pilots—but also a much wider range of people who collaborate and share knowledge across diverse organisations.¹⁰⁴ Oyster reef restoration trails, for example, are experimenting with different breeding protocols to produce oyster spat, as well as different substrates for the spat to settle on, ranging from empty oyster shells to wood from fruit trees, or artificial structures produced in a lab.¹⁰⁵ This relies on collaborations between diverse organisations including hatcheries, public and private aquaria and restaurants that supply empty oyster shells.¹⁰⁶ When working in windfarms, commercial subcontractors furthermore provide vessels and other specialist equipment that can be deployed for offshore restoration work, which requires extensive preparation and precision in terms of location and handling of logistics.¹⁰⁷ This logistical expertise is critical to the success of restoration work, including its continuous monitoring over time. In addition to NGO-led partnerships, private corporations are increasingly forced to become restoration leaders and knowledge providers through the requirements introduced into the tendering process for new windfarms.

Across the networks of practitioners dedicated to nature preservation, a shift in focus is discernible from traditional conservation approaches to proactive restoration and habitat creation.¹⁰⁸ Within the specific context of offshore wind farms, we see a corresponding shift in emphasis from the net environmental *impacts* of monopiles to their potential net *benefits*. This is not unique to the Netherlands. A broader synthesis review of nature enhancement approaches in offshore windfarms shows that the artificial reef effect is currently receiving the most attention.¹⁰⁹ Interest in the topic has notably spiked in the last 5 years, with most documentary evidence originating from the North Sea area, which is unsurprising given that it is a global hot spot for offshore wind.¹¹⁰ This does not mean, however, that multi-use solutions and nature-inclusive design of wind farms offer a ‘quick fix’ to combine (or trade-off between) the goals of the nature, energy and food transitions in a complex marine environment.

101 Sas and others (n 99).

102 North Sea Programme (n 88) at 39.

103 See, eg The Rich North Sea programme, <<https://www.derijkenoordzee.nl/en>> accessed 1 March 2025; ARK Rewilding Nederland, <<https://arkrewilding.nl/>> accessed 1 March 2025.

104 See *ibid*.

105 Based on personal communications of Rembrandt Zegers with ARK Rewilding Netherlands.

106 Based on personal communications of Rembrandt with Stichting Zeeschelp, Netherlands.

107 See, eg Joop WP Coolen and others, ‘Cruise Report 64PE505 - ReViFES Brown Bank, Frisian Front, Borkum Reef Grounds’ (Netherlands Institute for Sea Research (NIOZ) 2024), available at: <<https://doi.org/10.25850/nioz/7b.b.1g>> accessed 1 March 2025.

108 Based on personal communications of Rembrandt Zegers with World Wildlife Fund Netherlands.

109 Pardo and others (n 4) 4.

110 *ibid*.

3.3 The dynamics of the marine environment

It is widely acknowledged that structural knowledge gaps and a lack of (longer-term) monitoring data complicate the development of effective restoration methodologies at sea—inside and outside windfarms.¹¹¹ Habitat creation can have both positive and negative impacts on the broader marine environment, many of which remain poorly understood.¹¹² The creation of reefs in areas where they did not previously exist may not simply result in a net gain of target species. It may also change the wider food-web structure, which could, for example, draw higher numbers of seabirds into a windfarm, leading to an increase in unwanted interactions and associated risks to bird populations.¹¹³ In other words, we are contending with a highly complex and dynamic marine environment that by its very nature does not lend itself to spatially and functionally segregated thinking about environmental impacts and benefits.¹¹⁴

Most restoration policies prioritise habitats and species that are in unfavourable condition in accordance with the EU Habitats Directive and the OSPAR List of Threatened and/or Declining Species and Habitats. While this makes sense from the point of view of aligning environmental policy goals and targets, it is not usually the starting point for restoration practitioners. Empirical research shows, for example, that the justifications given by restoration practitioners in the Netherlands for restoration interventions (albeit not specifically at sea) reflect a plurality of values, human-nature relationships, ethics and pragmatic considerations.¹¹⁵ Practitioners are also starting to conceptualise increasingly more complex restoration approaches that target multiple species in a mutually supportive way.¹¹⁶ What is feasible varies from one location to the next and depends entirely on local conditions, but the term ‘seascape’ (as analogous to landscape) is gaining momentum.¹¹⁷ This expresses the idea that for marine ecosystem restoration to be successful, it requires thinking at a much larger scale than we are currently used to, as well as a much better understanding of connectivity between different parts of the marine environment and how to leverage that effectively. More fundamentally, it can be observed that current governance practices and regulation of restoration appear to be premised on a very different kind of engaging with, and relating to, the marine environment than that experienced by many practitioners involved in ‘doing’ restoration. Many practitioners dedicate their lives and careers to marine restoration because they have a personal connection with and experience of being ‘in’ the marine environment, for example, as sailors, divers, or having grown up or spent meaningful time on the coast or at sea.¹¹⁸ For many people, a sense of well-being is derived from relationships with other humans and with non-human nature, mediated by particular places such as the sea.¹¹⁹ We will return to the significance of such relational values in Section 5.

111 North Sea Programme (n 88) at 33, 39; Defra, Government Response (n 73); NatureScot (78); Pardo and others (n 4) 12.

112 Pardo and others (n 4) 12.

113 *ibid* 11.

114 See further Section 4.

115 This study also suggests a blurring of boundaries in practice between ethics and pragmatism, and between nature and culture, see Iris M Hertog and Esther Turnhout, ‘Ideals and Pragmatism in the Justification of Ecological Restoration’ (2018) 26 *Restoration Ecology* 1221.

116 Based on personal communications of Rembrandt Zegers with ARK Rewilding Netherlands.

117 ARK Rewilding Netherlands, for example, advocates for a ‘seawilding’ approach that adopts a seascape perspective, see ARK Rewilding Netherlands, Seawilding Practitioner Track, available at: <https://www.oud.ark.eu/sites/default/files/media/Brochure_Engels_20-12.pdf> accessed 1 March 2025.

118 Empirical studies show that people engaged in nature conservation across Europe all give relational motivations to explain their commitment to their work, including eudemonic values (focussed on a meaningful life), see Luuk Knippenberg and others, ‘Relational Value, Partnership, Eudaimonia: A Review’ (2018) 35 *Sustainability Challenges: Relational Values* 39; Rryan JG van den Born and others, ‘The Missing Pillar: Eudemonic Values in the Justification of Nature Conservation’ (2018) 61 *Journal of Environmental Planning and Management* 841.

119 See, eg Kai MA Chan and others, ‘Why Protect Nature? Rethinking Values and the Environment’ (2016) 113 *Proceedings of the National Academy of Sciences* 1462, 1463.

3.4 Regulatory hurdles and procedural limitations

A final observation to make here is that current regulatory frameworks in most jurisdictions are far from being attuned to either the practical realities of restoration at sea or the relationships between different legal obligations and procedures. For example, for the multi-use of windfarms in the Netherlands an 'area passport' is required for effective spatial planning.¹²⁰ In practice, this is currently developed too late in the planning process, resulting in highly fragmented spatial use that is particularly detrimental to nature, and ultimately to achieving restoration objectives.¹²¹ Other regulatory complications arise from decommissioning rules currently applicable to offshore wind farms, which by default include a complete removal obligation for all infrastructure at the end of the licence period. This removal obligation in principle includes all nature-inclusive design features and objects placed in the windfarm for nature restoration purposes.¹²² This means that hard substrates placed to establish oyster beds, for example, would have to be removed again even if they have been fully colonised. While developers in most North Sea jurisdictions should be able to apply for permission to only partially remove or leave structures in place in order to reduce the environmental damage caused by removal,¹²³ current permitting procedures for the placement of objects are often not yet aligned with longer-term nature enhancement objectives, leaving actors currently carrying out pilot projects with significant uncertainties as to what to expect at the end of the windfarm's lifespan.

Also outside the context of windfarms, restoration pilots run into the limits of existing legal and permitting frameworks that are often designed for different purposes, such as aquaculture, and not tailored to restoration objectives.¹²⁴ As a result, in many jurisdictions it is currently the hurdles in the permitting process, rather than ecological considerations, that direct restoration site selection.¹²⁵ These conflicting regulations and governance practices are difficult to square with an emerging 'regenerative approach', or at least this rationale is not widely reflected in practice yet.

4. FURTHER UNPACKING RESTORATION: THE UNDERPINNING CONCEPTIONS OF 'NATURE'

Tracing the concept of restoration in the law, policy and practice discussed above, reveals a certain mismatch between, on the one hand, the grand narrative at the level of global policy that frames restoration in transformational terms of a 'rediscovered relationship with nature' and a 'culture shift' with broad ambitions of resilience and co-benefits, and, on the other hand, the apparently still limited set of value-assumptions about 'nature' on which it remains premised. This becomes increasingly evident in the more technocratic approaches to integrating restoration into law and policy at the regional and national levels and in the practical governance of restoration 'on the ground'. The emerging approaches to restoration in the North Sea are diverse and informed by different pragmatic considerations. Yet, as this section will unpack further,

120 2020 North Sea Agreement between the Dutch government and stakeholders through to 2030, paras 4.1 and 4.16, available at: <<https://www.noordzeeloket.nl/en/@238924/north-sea-agreement/>> accessed 1 March 2025.

121 Ecowende, Vogelbescherming Nederland, Natuur & Milieu, WWF, and The North Sea Foundation, 'Position Paper: Multi-Use in Wind Farms—Area Passports', 7 March 2024, available at: <<https://noordzee.s3.eu-west-1.amazonaws.com/app/uploads/2024/03/29164719/PDF-Position-Paper-on-Multi-Use-in-Dutch-OWFs-English.pdf>> accessed 1 March 2025.

122 See for an extensive analysis of decommissioning rules in the North Sea Ignacio Herrera Anchustegui and others, 'Understanding Decommissioning of Offshore Infrastructures: A Legal and Economic Appetizer' (2021).

123 *ibid*; Rebecca Hall, Eva Topham and Elsa João, 'Environmental Impact Assessment for the Decommissioning of Offshore Wind Farms' (2022) 165 Renewable and Sustainable Energy Reviews 112580; Ashley M Fowler and others, 'The Ecology of Infrastructure Decommissioning in the North Sea: What We Need to Know and How to Achieve It' (2020) 77 ICES Journal of Marine Science 1109.

124 NatureScot (n 78) para iii.

125 Bell-James, Foster and Shumway (n 6); Silliman and others (n 3).

what the law and policy layers seem to have in common is their underpinning conception of 'nature'.

Whether nature is reduced to 'biodiversity' or understood in terms of ecosystem services that support economic development and human well-being more broadly, nature is in all instances conceptualised primarily based on economic, instrumental or other non-relational values. Even where there is an emphasis on ecosystems and their 'carrying capacity' or on a wider range of ecosystem services, these concepts remain ambiguous and selective in their implementation. For some, ecosystem-based concepts may express more intrinsic values of nature (still, mostly understood in non-relational terms), yet the implementation thereof through legal frameworks is widely observed to remain largely anthropocentric, managerial and closely tied to the sustainable development paradigm.¹²⁶ This dominant framing of nature has important material, socio-political and governance implications. It can also be contrasted with restoration practitioners' perceptions of nature, which are more pluralistic and relational. This is not currently reflected or accommodated in the decision-making processes and governance of nature conservation and restoration, which appear to be obstructive rather than conducive to the 'culture shift' and 'transition of ideas' in our relationship with nature that is aspired to. We will consider each of these aspects in turn.

4.1 The valuation of nature: a hegemonic paradigm

Offsetting and BNG/MNG are textbook examples of regulatory instruments premised on the quantification of (parts of) nature through standardised metrics and valuation thereof in economic terms. This equally holds true for policies seeking to marry the objectives of further intensifying the use of the North Sea and nature enhancement.¹²⁷ These seemingly opposing dynamics become mutually supportive in the 'ongoing conceptual transformation of "nature" and its various processes and potentialities into "natural capital" and "ecosystem services"'.¹²⁸ The growing demand for enhanced or restored natural capital drives an emerging 'economy of repair' in which an economic value is put on nature twice: once for its use and again for its capacity to be restored.¹²⁹ The economic valuation of nature and the assumption that this is a prerequisite for its effective management—despite ample evidence to the contrary—is a hegemonic paradigm in which current approaches to sustainable use, conservation *and* restoration are all firmly rooted.¹³⁰ As a result, these approaches tend to reproduce many of the environmental harms and social inequities that the 'blue economy' claims to want to overcome.¹³¹

Maechler and Boisvert describe this 'valuation-centrism' in nature conservation policy as 'a system of discourse and knowledge that subverts all exit strategies from the ecological crisis into valuation practices and that thwarts imagining "other natures"'.¹³² Building on research that shows how ecosystem complexity resists commodification and standardised metrics, and the resultant disconnect between the theory and practice of economic valuation of nature, they investigate why valuation-based approaches to nature protection remain hegemonic despite

126 See, eg De Lucia, who shows that only a few conceptual engagements with ecosystems and their governance adopt a more relational perspective, which is not yet reflected in law and policy, Vito De Lucia, 'Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law' (2015) 27 *Journal of Environmental Law* 91, 105–106. See in the context of ecosystem restoration also Carolina Murcia and others, 'A Critique of the "Novel Ecosystem" Concept' (2014) 29 *Trends in Ecology & Evolution* 548.

127 Or as the Dutch North Sea Programme (n 88) at 92 puts it: 'nature-inclusive design and building with nature, in conjunction with nature restoration projects, can lead to a sustainable profile of the Dutch blue economy'.

128 Dehm (n 10) 70; Sylvain Maechler and Valérie Boisvert, 'Valuing Nature to Save It? The Centrality of Valuation in the New Spirit of Conservation' (2024) 24 *Global Environmental Politics* 10.

129 Dehm (n 10) 91.

130 Maechler and Boisvert (n 128); Michelle Voyer and others, 'Shades of Blue: What Do Competing Interpretations of the Blue Economy Mean for Oceans Governance?' (2018) 20 *Journal of Environmental Policy & Planning* 595, 611.

131 Nathan J Bennett and others, 'Social Sustainability and Equity in the Blue Economy' (2022) 5 *One Earth* 964.

132 Maechler and Boisvert (n 128).

mounting evidence of their failure to deliver the promised results.¹³³ It remains an apparently unquestioned premise that the economic valuation of nature is a prerequisite for its effective management. This premise is also reproduced and remains unchallenged in the debates around the development of MNG or indeed the EU NRL, which all centre around the technocratic aspects of how to devise assessment frameworks and appropriate metrics to quantify ‘benefits’ and ‘measurable improvements’, rather than more preliminary questions of whose values, interests and knowledge are accounted for, and for whom nature is valued and enhanced in the first place.¹³⁴

The widespread uptake of economic metaphors such as ‘ecosystem services’ and ‘natural capital’ is not just symbolic, it does important ideological work too by ‘politically shifting how we think about the environment and how it is governed.’¹³⁵ In order to qualify two fundamentally different socio-ecological practices (an extractive/harmful activity and a conservation/restoration activity) as ‘equivalent’ or ‘additional’ in the context of restoration, abstractions, simplifications and conceptual transformations of nature are inevitably relied on.¹³⁶ The claim of ‘equivalence’ or ‘additionality’ creates a strategic relationship between two seemingly opposed ways of governing nature: ‘an “extractive” power over nature that appropriates resources alongside a “productive” power over nature that seeks to foster life.’¹³⁷ The co-articulation of these two modes of governance and the goal of further intensifying both at the same time also has material implications. Legal instruments that attempt to put this co-articulation into practice, such as biodiversity offsetting and net gain, have been widely criticized for legitimising and even incentivising more intensified harmful activities, as well as for being a distraction from efforts to effectively address the systemic drivers of ecosystem degradation.¹³⁸ The scientific evidence base for offsetting and net gain has furthermore been found to be thin, with evidence of biodiversity gains hard to come by, and losses often inadequately accounted for—underlining the mismatch between the valuation approach in theory and in practice.¹³⁹

The principle of additionality on which restoration law and policy relies does not resolve these inherent contradictions, nor does it mark a departure from valuation-centrism. In fact, while the strong emphasis on restoration as *complementary* to conservation may be a recent development, its rationale goes right back to the first iterations of the ‘green economy’ concept in the sustainable development agenda. UNEP’s 2011 ‘Towards the Green Economy’ Report states that, in a green economy, ‘the development path should maintain, *enhance and, where necessary, rebuild* natural capital as a critical economic asset and as a source of public benefits.’¹⁴⁰ As such, restoration is firmly rooted in the sustainable development paradigm with its ever-increasing imperative for efficiency.¹⁴¹ As long as the restoration agenda is based on the same inherently contradictory premises as outlined above, it is very unlikely to lead to more

133 *ibid.*

134 Sylvain Maechler, ‘Accounting for Whom? The Financialisation of the Environmental Economic Transition’ (2023) 28 *New Political Economy* 416.

135 Julia Dehm, ‘Legally Constituting the Value of Nature: The Green Economy and Stranded Assets’ in Isabel Feichtner and Geoff Gordon (eds), *Constitutions of Value: Law, Governance, and Political Ecology* (Routledge 2023) 262.

136 Dehm (n 10) 84.

137 *ibid* 86.

138 See for a discussion of critiques *ibid* 90, 97; Maechler and Boisvert (n 128).

139 Jonas Josefsson and others, ‘Compensating for Lost Nature Values through Biodiversity Offsetting—Where Is the Evidence?’ (2021) 257 *Biological Conservation* 109117; Maechler and Boisvert (n 128).

140 UNEP, ‘Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication’ (2011), available at: https://sustainabledevelopment.un.org/content/documents/126GER_synthesis_en.pdf, p 1. Emphasis added. The report uses the term ‘restoration’ in its recommendation that ‘a green economy grows faster than a brown economy over time, while maintaining and restoring natural capital’, *ibid* at 22.

141 See, eg Global Biodiversity Framework (n 26), target 10, ‘through a substantial increase of the application of biodiversity friendly practices [...] contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature’s contributions to people, including ecosystem functions and services’.

‘regenerative’ outcomes. In fact, this hegemonic paradigm actually inhibits alternatives and transformative innovation in practice.

Maechler and Boisvert show that actors wanting to engage with alternative approaches tend to be absorbed by the dominant framing of the valuation approach as the most pragmatic—a narrative which is ‘emptied of any theoretical content, depoliticized, and deliberately blurred to elicit consensus and support’.¹⁴² It is also disconnected from practice and evidence that consistently privileging a limited set of (economic) values actually contributes to socio-environmental conflicts and prevents transformative change.¹⁴³ The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) found in their 2022 Values Assessment Report that the predominant environmental governance frameworks have routinely privileged instrumental values and contributed to the present biodiversity, climate and health crises. Their assessment shows that frameworks that enable the expression of a plurality of value types, including intrinsic and relational values, can support sustainability and social justice outcomes—in particular through strong and inclusive participatory processes.¹⁴⁴ Values and processes of value formation are inherently relational, they come about through co-articulation between individuals and socio-ecological ‘wholes’.¹⁴⁵ As Dehm observes, ‘these practices, and how they are structured, produced and enabled by law, inevitably become a key site of struggle for constituting social relations differently’.¹⁴⁶ The IPBES similarly recommends that ‘effective policies aiming to influence values can benefit from understanding value formation and change as interrelated individual, social and socio-ecological processes’.¹⁴⁷ In other words, there is an important facilitative role for law and governance in effectuating value and even paradigm shifts. The governance and decision-making processes for the restoration agenda in the North Sea that we examined are currently not just failing to live up to that potential, they are inhibiting it.

4.2 Aggregative decision-making about nature

Nature is inherently place-bound and embedded in social, ecological, cultural, political and economic contexts. The different ways in which communities situated therein value nature are thus ‘intimately bound’ with the ways in which they understand the webs of relations between human and non-human parts of nature.¹⁴⁸ As Dehm points out, such value practices are at the same time reflective and constitutive of the ways in which different communities understand nature, and ‘give rise to plural political ontologies, diverse natures, and ways of living in the world’.¹⁴⁹ What is problematic about the trade-off logic that is commonly applied in conservation decision-making, as seen, for example, in the EU legal framework for conservation and restoration, is that it simplifies and obscures these much more complex processes of knowledge, value and interest formation, and overlooks their situatedness.¹⁵⁰ Of course, gains and losses are inevitable in complex multi-stakeholder decision-making, and trade-offs may provide useful insight into the stakes involved and increase the legitimacy of public interest decision-making, or so the theory goes. What is problematic, is rather the aggregative model of decision-making through which the trade-off comes about.

142 Maechler and Boisvert (n 128) 25.

143 *ibid.*

144 IPBES, ‘Methodological assessment of the diverse values and valuation of nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2022)’, p 36, available at: <https://doi.org/10.5281/zenodo.7687931> accessed 1 March 2025.

145 Dehm (n 135) 256.

146 *ibid* 261.

147 IPBES (n 144) at 41.

148 Dehm (n 135) 261.

149 *ibid.*

150 Pieraccini (n 45) 3.

As Pieraccini has shown in the context of the EU Habitats Directive, the outcome in aggregative decision-making models is a compromise between pre-determined, pre-formed interests or interest groups: 'the decision-making space is not a space for interest *generation*, which is at the core of deliberative approaches, but it is a space for interest *negotiation*'.¹⁵¹ This means that knowledge, values and interests are not produced relationally and inter-subjectively, but rather assumed to be pre-assigned to certain individuals or groups. 'The epistemological genesis of the interests that are compared are likely to be ignored if the interests are taken as given and this may mask power relations as well as the use of different evidentiary standards in the determination of what is valued and how'.¹⁵² This aggregate thinking is not confined to the determination of human interests in the environment, but also extends to nature itself, where the focus is on measurable aggregate species or habitat levels, rather than on situated values that may be lost or enhanced in a particular place.¹⁵³

Law based on the aggregative model points the decision-maker to scientific data and experts to objectively determine the interests in conservation or restoration on the basis of standardised indicators and criteria, and this 'neutral' assessment is subsequently applied by the decision-maker.¹⁵⁴ While there are inevitably variations in the implementation at the domestic level of member states,¹⁵⁵ EU conservation law and the Court of Justice of the European Union's interpretation thereof, generally construct 'nature' as something that is 'out there, discoverable objectively by science', and procedural steps such as environmental impact assessments as 'something that must remain unpolluted by non-scientific values'.¹⁵⁶ This approach is practically and theoretically questionable, not only because, as observed above, nature cannot be dis-embedded from its socio-political and ecological context, it also glosses over the fact that 'scientific truth-making' is equally a social and political enterprise.¹⁵⁷ The same questions arise in the use of assessment frameworks and standardised metrics to quantify offsets, net gain or 'measurable improvements'.¹⁵⁸ Not all values relevant to such assessments may be quantifiable in the first place, and even if they were, the problem of determining 'equivalence' or 'additionality' between distinct sets of values remains. The result is that valuation-centrism has 'profound transformative effects on social relations with nature', yet in practice, it 'is failing to provide the purported protections it promised'.¹⁵⁹

5. BEYOND THE HEGEMONIC PARADIGM: TOWARDS A RELATIONAL APPROACH

How then, might we move beyond this restrictive paradigm? We propose that a first productive step would be centring a relational approach. A relational approach offers an alternative to, and moves beyond, the dichotomy between 'instrumental' and 'intrinsic' value approaches to nature conservation and related binaries such as human/non-human, or natural/unnatural.¹⁶⁰ To put it in more practical terms: it recognises that individual and community relationships with nature

151 *ibid* 4. Emphases added.

152 *ibid* 5.

153 Dehm (n 10) 101 building on; Sian Sullivan, 'What's Ontology Got to Do with It? On the Knowledge of Nature and the Nature of Knowledge in Environmental Anthropology' in Helen Kopnina and Eleanor Shoreman-Quimet (eds), *Routledge Handbook of Environmental Anthropology* (Routledge 2017).

154 See for a critique of the presumed objectivity and superiority of scientific knowledge in EU marine governance also Mara Ntona, 'The Knowledge-Power Nexus in EU Marine Governance: From Orthodoxy to Pluralism by Way of the Human Right to Science' (2024) 15 *Journal of Human Rights and the Environment* 127.

155 Mariolina Eliantonio, Emma Lees and Tiina Paloniitty (eds), *EU Environmental Principles and Scientific Uncertainty before National Courts: The Case of the Habitats Directive* (Hart 2023).

156 Pieraccini (n 45) 8.

157 *ibid*; Ntona (n 154).

158 Anna-Kaisa Tupala, Suvi Huttunen and Panu Halmé, 'Social Impacts of Biodiversity Offsetting: A Review' (2022) 267 *Biological Conservation* 109431.

159 Dehm (n 10) 97.

160 Marion Hourdequin and David Wong, 'A Relational Approach to Environmental Ethics' (2005) 32 *Journal of Chinese Philosophy* 19; Gillespie (n 11) 7; Chan and others (n 119).

are not solely motivated by the inherent worth of nature or parts thereof (intrinsic), or how it satisfies their needs (instrumental). People also ‘consider the appropriateness of how they relate with nature and with others, including the actions and habits conducive to a good life, both meaningful and satisfying.’¹⁶¹ The relationship itself has constitutive value in the sense that it is part of a greater meaningful whole (ie not just causal): ‘the relational triad includes humans, nature *and* their relationship in their dynamic interactions of encounter and response.’¹⁶² Or as Australian aboriginal scholar Mary Graham put it: ‘the two most important kinds of relationship in life are, firstly, those between land and people and, secondly, those amongst people themselves, the second being always contingent upon the first.’¹⁶³

Relational values are central to many indigenous worldviews,¹⁶⁴ but not exclusive thereto.¹⁶⁵ Relational values are plural and while relational practices have deteriorated drastically in globalised, neoliberal consumer societies,¹⁶⁶ they are seeing resurgences in a variety of forms and sectors; from new forms of commons or ‘commoning’,¹⁶⁷ to initiatives to conceptualise political representation of the North Sea in and of itself,¹⁶⁸ or successful examples of community-led management of local MPAs.¹⁶⁹ As observed in Section 3, and supported by empirical studies among constituencies across Europe, the motivations of people engaged in nature conservation are primarily relational.¹⁷⁰ While relational values may be difficult to locate in the Western metaphysical tradition of separation between humans and nature, ‘they are very real in real lives.’¹⁷¹ The conservation and emerging restoration communities may thus be particularly well-placed to start experimenting with more relational approaches to nature restoration from the ‘bottom-up’. Given the dynamic nature of the marine environment of the North Sea, this will involve cultivating relations not just at the very local scale but also within a larger shared environment. Hourdequin and Wong argue that relational approaches are capable of expanding out into increasingly larger circles and eventually even to global environments, but that ‘the development of a sense of accountability to others, human and nonhuman, starts within smaller circles.’¹⁷² After all, a relational approach is not simply an appeal to different values, it is a practice. Relationality is constituted, sustained and strengthened through practice.¹⁷³ It is reciprocal, which means that it involves continuous reflexive learning and responsibilities of care.¹⁷⁴

161 Chan and others (n 119) 1462; Knippenberg and others (n 118).

162 Knippenberg and others (n 118) 41. Emphasis added.

163 Mary Graham, ‘Some Thoughts about the Philosophical Underpinnings of Aboriginal Worldviews’ (1999) 3 *Worldviews: Global Religions, Culture, and Ecology* 105, 106.

164 See, eg Josefsson and others (n 139); Lauren Tynan, ‘What Is Relationality? Indigenous Knowledges, Practices and Responsibilities with Kin’ (2021) 28 *Cultural Geographies* 597; Vanessa Watts, ‘Indigenous Place-Thought & Agency amongst Humans and Non-Humans (First Woman and Sky Woman Go on a European World Tour!)’ (2013) 2 *Decolonization: Indigeneity, Education & Society* 20; Bawaka Country and others, ‘Working with and Learning from Country: Decentring Human Author-It’y’ (2015) 22 *Cultural Geographies* 269; Amanda C Thomas, ‘Indigenous More-than-Humanisms: Relational Ethics with the Hurunui River in Aotearoa New Zealand’ (2015) 16 *Social & Cultural Geography* 974.

165 Chan and others (n 119) 1463.

166 See Hourdequin and Wong (n 160) 30 for a rebuttal of the argument that the relational approach has become outmoded by rapid global economic and cultural changes.

167 See, for example, David Bollier and Silke Helfrich (eds), *The Wealth of the Commons: A World beyond the Market & State* (Levellers Press 2012).

168 See, eg Embassy of the North Sea <<https://www.embassyofthenorthsea.com/>>, accessed 1 March 2025.

169 See examples in the Firth of Clyde in Scotland and Lyme Bay in England, Bryce D Stewart and others, ‘Marine Conservation Begins at Home: How a Local Community and Protection of a Small Bay Sent Waves of Change Around the UK and Beyond’ (2020) 7 *Frontiers in Marine Science*; Chloe Renn and others, ‘Lessons from Lyme Bay (UK) to Inform Policy, Management, and Monitoring of Marine Protected Areas’ (2024) 81 *ICES Journal of Marine Science* 276.

170 Knippenberg and others (n 118).

171 *ibid* 39. See also Rembrandt Zegers, *Making Nature Social: Towards a Relationship with Nature* (Lexington Books 2024); Hartmut Rosa, *Resonance: A Sociology of Our Relationship to the World* (Polity 2019).

172 Hourdequin and Wong (n 160) 30.

173 Tynan (n 164) 601.

174 *ibid* 603. Hourdequin and Wong (n 160) 29, suggest that ‘the most ethically valuable aspect of an identity tied to particular people and to particular places in the world—with their animals, plants, neighborhoods, rivers, playgrounds and shops—is experiencing oneself as accountable to others and as an agent with an active role in the world. In relationships, one learns that one’s actions *matter*’.

This can be contrasted with the (Western) ethic of rights-based entitlements and individualist notions of competition.

A relational approach to law and governance thus entails a shift in emphasis away from the universalist, neoliberal idea of rights, towards a focus on institutions and facilitative, inclusive processes of environmental governance and decision-making. A relational approach also questions the efficacy of mandating and conceptualising nature conservation and restoration at the highest level (international, or even national) if this is not co-constituted by those 'on the ground'.¹⁷⁵ Relational forms of governance should ideally facilitate reciprocal relationships between people, nature and place, across multiple levels. This can take many different shapes and forms, but key characteristics include: deliberative and inclusive decision-making,¹⁷⁶ processes of value and knowledge production that include science as well as other types of situated knowledge and ways of knowing,¹⁷⁷ and cooperation rather than competition.¹⁷⁸ A truly relational approach to governance would be 'bottom-up' in the sense that it first identifies who are relationally affected and involved, from which a place-based governance structure would then evolve. In other words, participants or 'representatives' in a relational model are in constant dialogue with each other, learning and sharing knowledge and perspectives on nature based on their own relationships with it.¹⁷⁹ This facilitates dialogues between knowledge systems, because multiple ways of knowing a particular place or environment require representatives to 'weave these knowledges together' to form a holistic understanding, thereby also allowing them to bring other members of the community into their own relationships with nature, including those with non-human 'others' such as animals, plants or even ecosystems.¹⁸⁰ As Cano-Pecharroman and O'Donnell put it: 'representation becomes more attuned to place, both through a more granular characterization of who needs to have a seat at the table [...] and through the recognition and uplifting of cultural values and decision-making processes that are embedded in place'.¹⁸¹

Relational representation is admittedly challenging to implement against the background of a top-down governance system that favours stability and that prioritises particular forms of knowledge and interests over others. Deliberative decision-making is, as Pieraccini warns, not the same thing as simply strengthening public consultation procedures.¹⁸² Consulting stakeholders on a trade-off between different interests still relies on an aggregative model. Instead, 'deliberative solutions draw on the shared lived experiences of enquirers who are enmeshed in a complex web of social-ecological relationships'.¹⁸³ She furthermore recommends that monitoring the outcomes of decisions is key to enable reflection, re-evaluation and to assist future deliberations.¹⁸⁴ Such feedback loops should ideally be short and direct, and again inclusive of all representatives (ie not just the relevant public authorities and industry actors) so that revisions are informed by situated experiences with the consequences of the initial decision. Reflexive

175 See also Jérémie Gilbert and others, 'The Rights of Nature as a Legal Response to the Global Environmental Crisis? A Critical Review of International Law's "Greening" Agenda' in Daniëlla Dam-de Jong and Fabian Amtenbrink (eds), *Netherlands Yearbook of International Law 2021: A Greener International Law—International Legal Responses to the Global Environmental Crisis* (TMC Asser Press 2023) 66.

176 IPBES (n 144).

177 Chan and others (n 119) 1464.

178 Afshin Akhtar-Khavari, 'Restoration and Cooperation for Flourishing Socio-Ecological Landscapes' (2020) 11 *Transnational Legal Theory* 62; Sam J Buckton and others, 'The Regenerative Lens: A Conceptual Framework for Regenerative Social-Ecological Systems' (2023) 6 *One Earth* 824.

179 Lidia Cano-Pecharroman and Erin O'Donnell, 'Relational Representation: Speaking with and Not about Nature' (2024) 10 *PLOS Water* e0000236.

180 *ibid* 21. See also more generally Donna J Haraway, *When Species Meet* (University of Minnesota Press 2007); Donna J Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Duke UP 2016).

181 Cano-Pecharroman and O'Donnell (n 179) 21.

182 Pieraccini (n 45) 19.

183 *ibid*.

184 *ibid*.

practices are widely recognised as a key enabling factor in pathways towards truly (as in not merely semantically) 'regenerative' socio-ecological systems.¹⁸⁵

6. CONCLUSION

In this article, we traced the concept of 'restoration' and its various articulations in regulatory and policy frameworks applicable to restoration efforts in the North Sea. Restoration policy goals are framed in transformational terms, seeking to inspire a 'culture shift' and 'transition of ideas' in how we think about ecosystems. At the higher policy levels, there is an emphasis on resilience and the pursuit of co-benefits in addressing intersecting challenges of climate change, biodiversity loss, food security and other socio-economic interests. The question of how 'mainstreaming' restoration can translate these ambitions into practice, however, is less straightforward. At the more technocratic levels of restoration governance, it becomes clear that despite lip service to transformational ambitions, current approaches to restoration remain firmly rooted in the same values paradigm as conventional approaches to conservation and thus run into the same conceptual and practical limitations. The complexities of the marine environment and the dynamics of competing interests in this shared environment underline in particular the limitations of the economic valuation-centric understanding of nature and aggregative decision-making about the interests involved. Where the restoration agenda seeks to marry the opposing dynamics of further intensified use of the North Sea and nature restoration, the inherent contradictions between these two modes of governance result not only in practical and regulatory hurdles for actors currently engaged in restoration practice but they also pre-empt alternative approaches and thereby limit the potential to develop more truly regenerative practices.

To move beyond the trappings of this hegemonic paradigm, we proposed that a relational approach offers an alternative starting point that is more closely aligned with the 'real live' experiences and motivations of people involved in conservation and restoration practice, and their understandings of nature. A relational approach to restoration goes beyond technical innovation and enhanced efficiency. Instead, it calls for innovation in how we think about and facilitate human/nature relationships, and the interest and knowledge-formation practices related thereto. The restoration agenda could offer opportunities for communities and practitioners to experiment with relational approaches at the (sea) grassroots level and feed their experience back into wider governance structures and policy objectives, rather than the other way around. While this may not be highly 'efficient' in the short-run, it might just lead to actual results in the long run, and in doing so, lay the foundations for the kind of culture change needed to put us on track towards a more reciprocal and truly regenerative way of living with nature.

185 See Buckton and others (n 178) who define regenerative socio-ecological systems as 'those that maintain positive reinforcing cycles of wellbeing within and beyond themselves, especially between humans and wider nature' and regenerative dynamics as ones 'in which humans are "participating as nature" to support continued co-evolution of the biosphere'.

