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Environmental Harms, Ecocidal Trends and Restorative Responses: Some Interdisciplinary Directions

1. Introduction

At the time of writing this chapter, in 2022, anyone concerned with the degrading of the natural environment and spiralling extinction of species around the world, would – or should – be acknowledging their debt to the publication, sixty years ago, of Rachel Carson's pioneering classic in environmental investigation – *Silent Spring* (Carson, [1962 [1965]). This classic study by a pioneering ecologist and biologist made a great contribution to the emergence of calls for serious intervention and action to preserve the environment at a time when science, economies and society were changing rapidly at an "impetuous and heedless pace" that was at odds with the "deliberate pace of nature" (Carson, 1965 ed., p. 24). There were obvious lessons to learn as the use of chemical pesticides and fertilizers became increasingly common in intensive agriculture, yet Carson faced considerable criticism, opposition and negative responses, generated by the pesticide and chemical companies as well as other (male!) scientists. Others in the conservation field however, as well as President Kennedy, all agreed that Carson's arguments and warnings were too powerful to be ignored. Perhaps figures like Kennedy could see the significance of Carson's (1965, p. 25) warning that: "Along with the possibility of the extinction of mankind by nuclear war, the central problem of our age has … become the contamination of man's total environment with … substances of incredible potential for harm." Sixty years since Carson's concerns were published, the world is still facing serious threats of harm, contamination and extinction. In this chapter – taking our starting point from the work of a biologist – we draw upon an interdisciplinary body of work to describe some of the environmental crimes and ecocidal trends that have not diminished but have gathered pace since the mid-twentieth century, largely

because they have not been taken seriously or have strategically been ignored by states and corporations alike. For example, as Fajardo (2023, private communication) points out, “There are hundreds of international environmental treaties that are ineffective because states do not want to limit their sovereignty.” In this chapter, in the case of biodiversity protection, we can only make reference to the CITES Convention but there are many other agreements, such as the Framework Convention on Biological Diversity, that could be more fully employed in practice and analysed here. We then focus on Environmental Restorative Justice (henceforth: ERJ), addressing its origins, aims, uses and challenges. By drawing upon recent interdisciplinary ERJ projects that explore new, imaginative ways of hearing the voices of the more-than-human and have them represented in RJ circles, we show the transformative potential of ERJ and call for greater support for restorative responses to the harms done to the planet and to us all on a daily basis.

2. ‘Silent Spring’ 60 years on: Birds still fading from the skies’

The heading to this section is taken from an article by the environmental and wildlife journalist Sharon Guynup (2022) which reflected on the impact of Carson’s book as a landmark chronicle of “the damage – and looming consequences – of human ‘contamination of air, earth, rivers, and sea with dangerous and even lethal materials’, which she called ‘elixirs of death.’” Guynup quotes from the justly famous “parable” or “fable for tomorrow” (Carson, 1965, p. 21) with which Carson opens chapter 1, describing the transformation of “a town in the heart of America” from one “where all life seemed to live in harmony with its surroundings” into a community living under a “shadow of death” and where nature seemed affected by “a strange stillness” and a silent spring arrived: “On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens, and scores of other bird voices there was now no

sound; only silence lay over the fields and woods and marsh" (Carson, 1965, p. 22).

The cause – Carson's "elixirs of death" – was the "lethal materials" in "sprays, dusts and aerosols ... applied almost universally to farms, gardens, forests and homes" (Carson, 1965, p. 25), examples being pesticides such as DDT that humans had developed to exert control over nature. Carson suggested such products should "not be called 'insecticides' but 'biocides'" and used this term to convey an alarm and warning about the widespread nature of the damage to the earth that would come from the escalating use of toxic materials in agriculture, industry and every-day life.

The changing nature of such terminology is interesting and provides a lexicological insight into how levels of alarm have been raised but also normalised in the decades since Carson's warning. Slowly but with developing urgency since the 1970s, environmentalists, critical criminologists, socio-legal scholars and others have begun to use the term 'ecocide' (Higgins, Short and South, 2013) to describe the destruction of plant and animal life and, in the 1980s, the Venezuelan writer Rosa del Olmo coined the term 'eco-bio-genocide' (del Olmo,1987; South, 2023) – both terms conveying the sense of disaster and finality signposting the road to extinction – for species and the planet. Rather chillingly, however, the word 'biocide' has actually become just a conventional, normalised term used in the chemical and landscape management industries, and defined by the British Health and Safety Executive as follows: "Biocidal products are used to protect people and animals, preserve goods, stop pests like insects or rodents and control viruses, bacteria and fungi through a chemical or biological action. Common examples are disinfectants, wood preservatives and insect repellents".[1]

[1] See https://www.hse.gov.uk/biocides/introduction.htm.

Considering the message that Carson wanted to convey – and the many subsequent critiques of our over-reliance on the chemical management of nature (e.g. European Environment Agency, 2023) – there may be some irony or oddity in the claim that such products are to be used to "*protect* people and animals" (emphasis added). The question is whether any immediate benefits outweigh the cumulative impacts of biocides, which may mean they could end up doing more harm than good.

Carson's work – alongside that of other pioneers in the 1960s (Rome, 2003) – stimulated various important initiatives, assisted, as mentioned above, by the forward-looking administration of President Kennedy – a key moment in the political science record of the 20th Century (indeed, although we focus here on developments related to justice and law, a full account would also highlight the roles of environmental politics and environmental economics in influencing environmental criminal law and policies).

As Rome (2003, p. 532) reports:

> "In the White House, Kennedy's top domestic priority was a growth-boosting tax cut. But he took a few important steps to address the issue of environmental quality. … In 1962 he held a White House Conference on Conservation [and] [a]fter the publication of *Silent Spring*, … instructed his advisers to report on the use of pesticides. He also appointed an activist secretary of the interior, Stewart L. Udall, who energetically promoted the cause of environmental protection … and argued that the nation's deteriorating environment was a sign of the 'disorder of our post-war priorities.'"

The 1963 book authored by Udall, *The Quiet Crisis*, contrasted the priorities given to the economy versus the environment, suggesting that for all the "wealth and power" of modern America, it was becoming "a land of vanishing beauty, … and of an overall environment that is diminished daily by pollution

and noise and blight" (Udall, 1963, p. viii). Awareness of a 'silent spring' and of the 'quiet crisis' led to some response and remediation yet Udall's words could easily have been written today and, of course, resonated then and now, around the world.

On the international stage, one of the most significant responses to these warnings was the signing of CITES – the Convention on International Trade in Endangered Species of Wild Fauna and Flora.[2] Launched in Washington DC in March 1973, CITES was an expression of a new conservationism, with the declared aim to "ensure that no species of wild fauna and flora becomes or remains subject to unsustainable exploitation because of international trade" (JNCC, 2019).

Despite a subsequent history of both celebration and critique of CITES (Wyatt, 2021; Goergen, 2022), it is important to note that its introduction occurred at a time when environmental awareness was still weak and calls for action were relatively scarce. As the CITES website notes: "when the ideas for CITES were first formed, in the 1960s, international discussion of the regulation of wildlife trade for conservation purposes was something relatively new". Since then, the CITES strategic vision has been subject to regular revision and updates. This has partly been accomplished through the mechanism of its Conferences of the Parties (COPs) which, while remaining anthropocentric, adopted the first Strategic Vision at its 11th meeting in 2000. Most recently, at its 18th meeting, it agreed a new Strategic Vision for 2021-2030, taking into account the 2030 Agenda for Sustainable Development.

Nonetheless, one question regarding the aims and hopes of CITES was – and is – whether the promise of protection of non-human species – *in the sense of preservation of species sustainability* – simply provides an enabling system for legitimate exploitation, abuse and excessive use of non-human species?

[2] See https://cites.org/eng/disc/what.php.

According to the CITES mission description: "Thousands of species are internationally traded and used by people in their daily lives for food, housing, health care, ecotourism, cosmetics or fashion" (CITES press release 2021).[3] This occurs with the aim of ensuring "that international trade in wild animals and plants is legal, sustainable and traceable, and does not threaten the survival of the species ...". On this point it is worth noting what the CITES website suggests in relation to the UN Sustainable Development Goals (SDGs): "The main challenge for CITES, within the broader framework of the SDGs, is to make species conservation and the promotion of prosperity mutually supportive".[4] This is, unsurprisingly, a source of tension given that economic growth as a foundation of 'prosperity' tends to be highly – and ecocidally – dependent on the opposite of conservation – i.e. extraction, exploitation, increasing production and expanding consumption (Stretesky, Long and Lynch, 2013; Brisman and South, 2014). Such tensions are not unfamiliar in the field of environmental policy, for example the imperatives of international organisations such as the World Trade Organisation (e.g. economic growth) and the United Nations Environment Programme (e.g. sustainability and environmental protection) are in direct conflict yet present to the world a message of 'joined up' cooperation (South, 2016).

To some extent, Udall's 'quiet crisis' remains background noise for most; many of its symptoms hidden, kept invisible or denied. As Monbiot (2019) argues: "What we see is not the economy. What we see is the tiny fragment of economic life we are supposed to see: the products and services we buy. The rest – the mines, plantations, factories and dumps required to deliver and remove them – are kept as far from our minds as possible. Given the scale of global extraction and waste disposal, it is a remarkable feat of perception management." This 'way of seeing' – or *not seeing* – hides the numerous invisible harms and crimes (Berger, 1972; Davies, Francis and Wyatt, 2014; South, 2014 a) degrading the

[3] See https://cites.org/eng/news/experts_advise_trade_levels_conservation_status_of_CITES-listed_animals.
[4] See https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=650&menu=3170.

environment and is a product of a 'world-view' dominated by the Global North, its embedded interests and its epistemologies (Franko Aas, 2012; de Sousa Santos, 2014; Goyes and South, 2019). The result is that the impacts of climate change and responsibility for its causes are massively differentiated and unequal (South, 2012) – and this is very starkly apparent in the case of communities that live close to nature. These are peoples who have done the least to contribute to climate change and yet are most at risk of losing their habitats and indeed their future as sustainable populations – the Indigenous populations of the world.

Addressing this distortion of perception and priorities has been central to efforts made over recent decades to draw attention to the importance of global warming and related climate change. Many causes of these threats have been detailed in the scientific literature (IPCC, Intergovernmental Panel on Climate Change, 2022) but there has been an odd disconnect between such explanations and one major source of contributary environmental harms. As a major report from UNODC (United Nations on Drugs and Crime) and WWF (World Wide Fund for Nature) (2022, p. 5) put it: "As pressure grows to respond to the climate crisis, so too does the recognition that this response needs to be multidimensional, including by stepping up the efforts to protect biodiversity." One element of these efforts, according to the report, is to take environmental *crime* far more seriously – an argument that was, in fact, already made a decade earlier by Interpol and UNEP with regard to CITES (Nelleman and Interpol, The International Criminal Police Organization, 2012, p. 6): "To become effective, voluntary trade programmes and the effective implementation of CITES, must be combined with an international law enforcement investigative and operational effort in collaboration with domestic police and investigative task forces in each country". In their report, UNODC and WWF (2022: p. 5) point out that "environmental crime impedes the transition to a more resilient and climate neutral society" but a focus on this has been "largely absent from the climate agenda", perhaps because "most activities contributing to climate change are caused by lawful

behaviour" (however 'lawful but awful' (Passas, 2005) they may be) and in light of the fact that the "predominant international response has been to use incentives rather than enforcement" (UNODC and WWF, 2022, p. 5).

This needs to change to respond to the ecocidal trends facing the planet and to provide justice-based restorative responses. As Higgins, Short and South (2013, p. 262) argued, what is required is a law of Ecocide that, first, responds to "human-caused environmental damage and degradation (whether committed during or outside of war-time), as a crime of strict liability (in other words, without intent)"[5]; and, second, puts in place forms of Restorative Justice that build on a duty of remedy for harm caused and address "the needs of the beleaguered party to restore that which has been harmed rather than simply fixating on the punishment of the perpetrator" (Higgins, Short and South, 2013, p. 255).

2.1 Ecocidal Trends and Climate Change Denial

For such important bodies as UNODC and WWF to link 'climate' and 'crime' together so explicitly is significant. It is not, however, a link that has been ignored elsewhere. For example, in his book, *Carbon Criminals, Climate Crimes*, the critical criminologist Ronald Kramer (2020) recounts two factors that propelled his research interest in climate change. As a criminologist concerned with the crimes of the powerful he was not surprised by links being made between climate change and the operations of corporations and states, but he was surprised by the gravity of the climate crisis and also by one other notable feature appearing in his reading: "how often those who commented on climate change used the word 'crime' in discussing the topic" (Kramer, 2020, p. 2). Among the most famous of these statements is that by the former executive director of Greenpeace UK, John Sauven, after the disappointing outcome of the 2009 Copenhagen

[5] More recent work on the development of a definition of ecocide for the purpose of drafting an instrument of international law (Stop Ecocide International, 2021), has suggested that "For the purpose of this Statute, "ecocide" means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts."

conference on climate change: “The city of Copenhagen is a *crime scene* tonight, with the *guilty* men and women fleeing to the airport” (quoted in Vidal, Stratton and Goldenberg, 2009). Kramer also quotes the question posed by Donald Brown, professor in environmental ethics, science and law at Pennsylvania State University, who asked whether “climate science disinformation is a crime against humanity?” and who observed that, while “[w]e may not have a word for this type of crime yet, … the international community should find a way of classifying extraordinarily irresponsible scientific claims that could lead to mass suffering as some type of crime against humanity” (Brown, 2010).

One key theme of Kramer’s book – and some other similar excellent studies such as Harvey’s (2021) *The Climate Emergency* – is (again) the tension or incompatibility between capitalism and sustainability. As Kramer (2020, p. 46) notes, capitalism is based on “a high carbon system” (Urry, 2011), and also fixated on *growth* (Ruggiero and South, 2013, p. 269). These two – carbon (e.g. dependence on oil) and growth (e.g. obsession with GDP) – make the possibility of *sustainability* an oxymoron: the capitalist thrust towards growth at all costs leads to the unsustainable use of planetary resources that will take us beyond a tipping point (Rockström *et al*, 2009). This argument has been made across many relevant scholarly disciplines but is well illustrated in the 2019 United Nations Environment Programme report, *Global Resources Outlook,* submitted to the International Resources Panel, which examined the pace of resource extraction and consumption from the 1970s onwards:

> “The extraction and processing of materials, fuels and food contribute half of total global greenhouse gas emissions and over 90 per cent of biodiversity loss and water stress.
>
> Resource extraction has more than tripled since 1970, including a fivefold increase in the use of non-metallic minerals and a 45 per cent increase in fossil fuel use.

> By 2060, global material use could double to 190 billion tonnes (from 92 billion), while greenhouse gas emissions could increase by 43 per cent."

Regardless of such evidence, however, forms of denial (Thiel and South, 2022) or what McGoey (2012) calls 'strategic ignorance', are powerful shapers of resistant human behaviour, 'business-as-usual' economic activity, and timid government policies. An example is provided by the US oil and gas multinational company Exxon, which from the 1970s had access to research that accurately predicted the impact of its activities on climate change but not only decided to ignore such predictions but also publicly dismiss all claims that associated climate change with the burning of fossil fuels (see e.g. Milman, 2023).

Even when the climate change challenge is acknowledged, it is treated as what Britzman (1998) calls 'difficult knowledge'. So although (at least in some countries and surveyed populations) there is increasing awareness of, and anxiety about, climate change, there is still resistance to proposals that would affect *quality of life*. As Bryan (2022, p. 331; drawing on Britzman, 1998) puts it, "socially traumatic knowledge" comes up against defences that enable "us to negate, resist, ignore or not know certain truths about ourselves and the world". Furthermore, the impacts of changes to our planet, as well as unwelcome reminders of climate instability signalling future disasters conveyed via news, science and entertainment media, are not just to be counted in physical but also in psychological terms. This is an area of interdisciplinary research that needs further work, as Bryan (2022, p. 331) observes: "Because research on the affective dimensions of climate change is very much in its infancy, our understanding of the complex ways in which various climate-related emotions such as grief, anxiety etc. manifest across geographies, cultures, and demographics remains limited, as does our understanding of the long-term effects of ecological grief" (Adams, 2021).

Of course, the additional global social trauma of the Covid-19 pandemic has added layers of complexity to the task of responding to 'difficult knowledge'. Some have argued that a 'convergence of crises' (Lam, South and Brisman, 2022) should be acting as a stimulus to action (Hook and Wisniewska, 2020, pp. 34-35), such as that urged by the UNODC which has noted that: "Habitat loss and wildlife exploitation – including its illegal trade – are making it easier for diseases to pass from other species to humans… Wildlife crime sets in motion a vicious circle jeopardizing our health, security and development" and must be tackled to prevent the next pandemic (UNODC, 2020). At the same time, others have claimed that the risks associated with both the Covid 19 pandemic and climate change have been exaggerated or are examples of manufactured hoaxes (Rutjens, van der Linden and van der Lee, 2021; Dobson, 2022). Enormous global challenges inevitably provoke serious and continuing debate but it is problematic if such debate is circular and does not move forward and yield concrete actions.

2.2 COP 27 and 'loss and damage' fund proposals

One such action may – eventually – follow from the conclusion to the 2022 Climate Change Conference which led to proposals for a new fund for "loss and damage" resulting from climate change.[6] This could provide an advance on current mechanisms for climate change mitigation but the necessary resources for implementation are not yet available. The proposition is based on the assumption that economically poor countries will reduce their CO2 emissions if rich countries provide money and technology in exchange and these discussions have allowed nations of the Global South to take a lead in negotiations about the relevant levels of contribution to be made by nations of the Global North.

The path to a global agreement on common environmental standards, including compensation for environmental and climate-related damage, will be

[6] See https://www.carbonbrief.org/cop27-key-outcomes-agreed-at-the-un-climate-talks-in-sharm-el-sheikh/.

difficult to achieve but such proposals could dovetail with calls for the introduction of a law of ecocide. For example, Killean (2021) considers the idea of "'greening' the Rome Statute" to explore whether reparations administered within the International Criminal Court (ICC) to respond to mass violence and human rights violations could also address environmental harms and damages. According to Killean (2021, p. 323), such an environmental reparation framework within the ICC could be enabled "(i) by introducing the concept of 'eco-sensitivity' to reparations designed to respond to other anthropocentric harms; (ii) by awarding reparations that explicitly recognise the harm caused by environmental destruction when possible; and (iii) by exploring the possibilities of an environmental approach towards 'transformative reparations'." Such directions lead us to our next section.

3. Environmental Restorative Justice

Restorative Justice (or RJ) offers some hope about ways forward but also signals the promise of breaking away from the constraints of 'northern' epistemologies and disciplinary silos, owing much to models of justice, respect and arbitration in 'southern' knowledge systems, and working across borders of knowledge and practice in the fields of law, therapy, theatre, art and so on (see e.g. Pali *et al*, 2022; Pointer and Pali, 2022). Indeed, the roots of RJ are to be traced in 'southern' Indigenous dispute resolution traditions which are focused on repairing harm, healing damaged relationships, fostering awareness of the rules, promoting community inclusion and cohesion, and re-integrating offenders. In the past decades, these traditions have informed efforts to reform the criminal justice system in Western countries, as a way to deal with its perceived ineffectiveness to deter crime and address harms to victims. In many, varied forms, RJ is now employed all around the world and has recently also been used to address environmental harms (Wijdekop, 2019; Pali and Aertsen, 2021; Pali, Forsyth and Tepper, 2022; Widowaty, Astuti and Adrian, 2022; Haluska,

2023) – in both administrative/civil and criminal cases. What generally goes under the label of "Environmental Restorative Justice" (ERJ) grounds its roots in many Indigenous cultures and cosmologies, which hold the central belief that humans and Nature are fundamentally interconnected and interdependent. It therefore opposes the typically Western, anthropocentric view that Nature belongs to human domination and is a commodity for human consumption and exploitation (Goyes *et al*., 2021; Haluska, 2023). ERJ embraces this eco-centric perspective and promotes the establishment of safe spaces where broadly defined victims and offenders voluntarily come together and engage in a meaningful dialogue also involving deep listening, participation, knowledge exchange, and efforts directed at healing and repairing harms, and at restoring communities, relationships, institutions and ecosystems damaged by human action or inaction. Some countries have institutionalised ERJ and have introduced it into their legal and criminal justice systems. For example, in the past two decades specialist environment courts were established in both Australia and New Zealand, which have experimented with using restorative justice conferences and sentencing (Forsyth *et al*., 2021; Hamilton, 2021; Haluska, 2023). Recent proposals suggested expanding the remit of ERJ beyond enforcement procedures to all stages of regulatory processes (Forsyth *et al*., 2021), and to the preparatory phases of constructing major, 'strategic' harms-bearing infrastructures often riddled with conflict between state-corporations and the local community (Di Ronco and Chiaramonte, 2022). In the latter cases, it should not be forgotten that even if public participation is standard practice in public infrastructure projects, it is often difficult for affected communities and activists to access information and effectively participate in decision-making processes (Brisman, 2013; South, 2014b). This is especially the case when their knowledge is intentionally undermined and mystified by corporations and state actors alike, and the actions of activists heavily policed and criminalised (Goyes, 2016; Di Ronco and Chiaramonte, 2022; Di Ronco, 2023). The participation of affected populations

and the public more generally is, however, crucial to reduce conflict and minimise harms related to developments such as 'megaprojects'.

Outside these recent developments, it is worth clarifying that ERJ is mainly focused on repairing *past harms*. By addressing past harms, however, ERJ also has an eye on the *future*: it seeks to avoid reoccurrence of harms, and also contributes to (re)constructing relations within the community – and between the community and Nature – which enable it to build capacity to prevent future harms (Forsyth, Pali and Tepper, 2022). Indeed, as Forsyth and colleagues (2022: p. 6) argue, the key idea is that restorative approaches to environmental harms "can support an agenda of reconnecting humans with the environment in ways that recognise our essential interdependence and seek to put limits on extractivist ideologies". While some communities may spontaneously embrace and embody eco-centric perspectives and practice RJ (however locally named) to repair environmental harms after they happen (see e.g. Komatsubara, 2021; Papadopoulos, de la Bellacasa and Tacchetti, 2023), others may need a little help: people's "seed of environmental philosophy in their inner world" (Komatsubara, 2022: p. 382) could organically be stimulated by restorative practitioners, artists and researchers during their interactions – a point to which we shall return later. For Haluska (2023), in the long run, a renewed connection with Nature linked to the systematic use of ERJ may also lead to an enhanced support for the introduction and better enforcement of rights of nature laws (see e.g. Stone, 1972; Darpö, 2021), not only due to public demand but also following pressure put on governments by corporations (which have far more political capital with which to lobby policy-makers and shape governmental decisions).

In essence, in the recent literature, ERJ is cited as the ideal approach to dealing with cases of environmental harm, particularly in the face of extremely low reporting, prosecution and sentencing regarding environmental crimes (Pali and Aertsen, 2021), and the well-known incapability of fines – the usual sanction used against environmental offences – to lead to repair of environmental harm

and devastation (Wijdekop, 2019).[7] Nonetheless, ERJ also poses some important challenges, which cannot be ignored. While the relevant literature discusses many of these challenges (see e.g. Forsyth, Pali and Tepper, 2022; White, 2022), we focus here on only two – the issues of participation and representation in ERJ circles and conferences. We believe these two challenges to be crucial and worthy of our attention for different reasons: while the lack of participation can obstruct access to ERJ and frustrate its long-term aim to activate a renewed connection with Nature, effective representation of all (broadly defined) victims – including the more-than-human – through interdisciplinary collaborations and projects, offers much hope for the future of ERJ, and hence also for the conservation of all living forms on our planet.

Starting with the issue of participation, ERJ requires that all affected parties directly and willingly participate in the RJ process, including multinational corporations which are often the source of environmental and ecological devastation through their actions or inaction and neglect. Earlier in this chapter we discussed the conflict between the capitalist mantra of growth and progress-at-all-costs (see also Varona, 2021), on the one hand, and sustainability and the need to protect the environment, on the other. Prioritising the former often leads to the strategic denial of harms or to resistance to what may be deemed as 'difficult knowledge' (see above). ERJ can help overcome state and corporate denial in specific practical cases, encouraging acknowledgement of the harms caused and the need to take responsibility for these, ultimately leading to action to repair such harms.

Ensuring that corporations become active participants in RJ circles is, however, not an easy task, most notably as it necessarily requires them to

[7] The importance of ecological restoration is also recognised in international legal scholarship, which sees it not only as essential to the survival of the planet (and of life on it), but also to the avoidance of global conflicts over ecosystem services and benefits, and to the achievement of social and environmental justice for the current and future generations (see e.g. Telesetsky, Cliquet, and Akhtar-Khavari, 2016). It should be noted here that such scholarship tends to be "intentionally focused on ecological restoration ultimately benefitting human beings" (Ibid., p. 39).

acknowledge the harms that they have caused, affecting human and non-human animals, plants, the environment and entire ecosystems. Acknowledging harms goes hand in hand with taking responsibility for them. However, more often than not, corporations deny such responsibility, as in the case of the operations of the fossil fuel giant Shell in the Niger delta. In this area, regular oil spills have contaminated the water stream, killing fish, increasing human mortality rates, and damaging local communities' livelihoods based on farming and fishing (South, 2015), leading to many transnational lawsuits filed against Shell in both Dutch and English courts.[8] Recently, nearly 14,000 affected people took Shell to court asking the company to clean-up water pollution and to provide compensation for the loss of livelihood and the damages caused to communal properties (Laville, 2023). As Laville (2023) reports however: "The company says it bears no responsibility for the clandestine siphoning off of oil from its pipelines by organised gangs, which it says causes many of the spills". Many neutralisation techniques have so far been used by the oil giant, including denial of responsibility, which in this specific case involved blaming others for the spills, whether they are organised crime networks (as in the quote above) or Shell's own local subsidiaries. In essence, after 80 years of extremely profitable operations, Shell is leaving the Niger delta without addressing the environmental pollution and damages it has caused.

The second challenge we want to address here focuses on the representation of the 'more-than-human' in ERJ circles and conferences. Indeed, ERJ also poses questions about how to make sure that the voices of all parties – including the harmed more-than-human – are effectively heard during ERJ processes (Pali and Aertsen, 2021; Forsyth, Pali and Tepper, 2022). This challenge is significant given the ontological impossibility of humans *knowing* what it means to be a river, a mountain, a non-human animal or a plant.

[8] See e.g. https://www.business-humanrights.org/en/latest-news/nigeria-shell-settles-lawsuit-in-the-netherlands-for-15-million-over-oil-spillages-in-niger-delta/.

In some cases, such as in New Zealand, Colombia, Ecuador, India and Uganda (Pali and Aertsen, 2021; Haluska, 2023), more-than-human entities have been given the status of legal subjects to be protected, which can be upheld in court. But even in such cases the challenge is not overcome. In practice, the issue is resolved through a fiction: non-human subjectivities are represented by humans – mainly by 'guardians' or custodians with local knowledge and a distinctive (often spiritual) place attachment, such as Indigenous Peoples, local communities, and also environmental activists (Forsyth *et al*., 2021). In fact, as the interdisciplinary projects discussed below illustrate, every one of us could potentially become a guardian. As the artist, activist and researcher Maria Lucia Cruz Correia (2021: p. 168) cogently put it: "To be a guardian of nature means to hold a cosmological view of people as part of nature, not separate from nor above it, to abide to an ethic of reciprocity and to have a sacred regard for all living species as kin. As Māori people share in the Whanganui's declaration of identity, 'I am the river, the river is me'".

Many innovative, interdisciplinary projects have investigated and tested new ways to 'be with' Nature and encourage their participants to hear the voices of e.g. rivers, non-human animals and plants, and become their guardians. Such interdisciplinary projects have often involved the arts, social sciences, law, among others – all disciplines that meet in the terrain of imagination (Pali *et al*., 2022) through the skilful mediation of the arts. Art, in particular, provides a "space in between" (Pali *et al*., 2022: p. 395) which facilitates connections, accountability and repair, and opens up new ways of imagining our relationship with Earth and its species and ecosystems.

For example, the recent performative, participatory and immersive art project *Voice of Nature: The Trial* by artist Correia (2021) used the example of ecocide in Ecuador to explore ways for participants to develop an empathetic, eco-centric perspective that allows them to become guardians of Nature. As the leading artist argued, the project is an "artistic speculative model to become a

guardian of nature – a legal representative of a non-human entity" (Correia, 2021: p. 168); such a model invites participants to decolonise themselves and open up to a new type of relationship with the environment, one that enables them to hear the voices of the more-than-human and care for them through legal and extra-legal struggles.

Hosted in the Old Court of Ghent (Belgium), *Voice of Nature: The Trial* built on previous experiences of mock trials which tested how an international crime of ecocide would work in practice. This performative 'restorative trial' experimented with using RJ to repair harms to Nature (obviously, only when harms are acknowledged by those who have caused them, and pending their willing participation) and, crucially, also attempted to hear the voice of Nature and to legally recognise its rights (see Pali *et al*., 2022, p. 387). Noteworthy earlier examples include the famous mock trial hosted in 2011 by the UK Supreme Court on the initiative of lawyer and activist Polly Higgins, and the follow-up sentencing event a year later in our own institution – the University of Essex – which also involved guardians representing birds and other natural life.[9]

Another creative, interdisciplinary attempt to represent more-than-human voices was imagined and developed within the project *Walking-with-Zenne*, which started at the beginning of 2021 and involved a group of researchers, artists, locals and interested people (Pali *et al*., 2022). The project focused on engaging – 'being with' – the Belgian river Zenne, a river that has been polluted, diverted, harmed, and taken for granted throughout the centuries (Pali *et al*., 2022). Participants attempted to 'be with' Zenne through walking – a mundane yet powerful act that engages all senses (see e.g. O'Neill and Roberts, 2019; McClanahan and South, 2020), invites an attitude of respect, and enables the establishment of a connection between walkers, the river and 'her' (Zenne is indeed a 'she', see Pali *et al*., 2022) surrounding environment. The project also

[9] See https://www1.essex.ac.uk/news/event.aspx?e_id=4036.

involved the use of a number of artistic wooden objects or 'props' which assisted participants – practically or symbolically – in the practices of observing, listening and collecting while 'mapping the river' – her relationships, harms, repair and resistance attempts and processes, etc. For example, to hear the voice of the river during a RJ circle, the project involved the use of an underwater microphone connected to a listening antennae (one of the artistic props). Through such symbolic prompts, Zenne could speak for herself, with her own voice, and be collectively listened to within the RJ circle. At the end of the walk and immersive experience, enriched by new ideas and imaginaries, and cherishing a new connection with Zenne, participants co-created a 'guardian of Nature contract': they embraced an eco-centric perspective that envisages humans as part of Nature – not above it – and took responsibility to protect and care for the river and her future conservation and thriving.

What these recent interdisciplinary ERJ projects demonstrate is that positive, empathetic, caring, eco-centric attitudes towards Nature could reside in (at least some) people and emerge from them while they are immersed in damaged or endangered environments, or while confronted with sensory, affective and emotional clues and information on ecocide and harms to Nature (on this point, see also Di Ronco, 2023). Such an attitude – which very much features people who mobilise for eco-justice – is a necessary prerequisite to actions aimed at repairing present and preventing future harms, and to discussions challenging our current ecocidal lifestyle that relies so much on extraction, exploitation and dominance of Nature. Finding ways to facilitate the emergence and activation of such attitudes – through interdisciplinary projects and beyond – seems crucial to the survival of our Planet.

4. Concluding thoughts

Following the interdisciplinary direction taken in green criminology, in this chapter we have drawn upon an interdisciplinary body of work to describe some

environmental crimes and ecocidal trends which have gathered pace over, roughly, the past 70 years. We have also discussed the largely insufficient steps taken so far to protect the environment at the local, national and international levels, and found encouragement only when addressing the practice and ethos of Environmental Restorative Justice. As explained above, while ERJ is mostly focused on repairing past harms, it also activates a process of capacity building within affected communities that enables them to (re)construct relations – both within them and with Nature – and prevent future harms. More generally, as the interdisciplinary projects mentioned above have demonstrated, many among us have in their 'inner worlds', the 'seeds' (Komatsubara, 2022) of eco-centric cosmologies, which – if allowed to germinate and grow – could enable people to become allies or guardians of Nature, helping them to engage in empathic attempts to understand the interests, needs and pain of Nature and defend it legally or through activist practices. Finding ways to facilitate such germination – through ERJ, interdisciplinary projects and beyond – seems to us urgent and essential to the survival of life on our Planet.

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