

# Using the Law to Save the Planet: Legal Options to Address Climate Change and Ecological Destruction

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## Abstract

Climate change and ecological destruction are among the most pressing issues of our time. In this special issue, academics from various legal and empirical disciplines contribute to providing an answer to whether, when and how different fields of law can be used as tools to enhance sustainability and to address climate change and ecological damage. These include (international) criminal law, liability and tort law, European law and regulations, competition law, corporate law, private law and tax law. These contributions were initially presented and discussed at a seminar held at the Erasmus University Rotterdam in May 2022. This editorial introduces the subject, discusses recent international developments and legal achievements to address the current ecological crisis, and describes how the law is increasingly mobilised from the ground up, by non-government organisations and individual legal professionals. It then progresses by summarising the keynote lecture of the seminar, given by the United Nations Special Rapporteur on Toxics and Human Rights. After this, all contributions to this special issue are shortly introduced and summarised.

**Keywords:** climate change, sustainability, ecocide, environmental justice, human rights.

Climate change and ecological destruction are among the most pressing issues of our time. The global climate has warmed up considerably during the last century, and increasingly so in recent decades.<sup>1</sup> Consequences of climate change can be experienced across the globe, with melting ice caps and glaciers, rising sea levels and more extreme weather events. The dire state of the environment is also evident from the critical endangering of species and the dramatic decline in biodiversity, which

some refer to as the sixth extinction.<sup>2</sup> Pollution of water, air and soil is at historically high levels and has seriously disrupted the self-regulatory capacity of the planet.<sup>3</sup> The scale of deforestation of the past 100 years equals that of the previous 9,000 years, owing to the continued expansion of land for agriculture, following from humanity's request for food.<sup>4</sup> The planet is crossing more and more boundaries, impacting the stability and safety of the complete earth system.<sup>5</sup>

In response to the foregoing issues, national and international government organisations, non-government organisations (NGOs), companies and citizens have been developing policies and practices to increase awareness and enable a lifestyle and economy that preserves the environment. At the international level, there have been various attempts to come to agreements aiming to decrease carbon emissions and calling unsustainable production and consumption patterns to a halt. Important landmarks are the 2012 Rio de Janeiro Summit on sustainability, the Paris Agreements of 2015, under the United Nations Framework Convention on Climate Change (UNFCCC) to mitigate climate change,<sup>6</sup> and the 2015 adoption of the 2030 Agenda for Sustainable Development, with its seventeen Sustainable Development Goals (SDGs) and seventeen targets to tackle climate change and ecological damage, as well as poverty and inequality.<sup>7</sup> These efforts have in some cases re-

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1 See the reports of the IPCC committee, e.g., IPCC, *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (2021).

2 R.H. Cowie, P. Bouchet & B. Fontaine, 'The Sixth Mass Extinction: Fact, Fiction or Speculation?' 97 *Biological Reviews* 640-63 (2022).

3 L. Persson, B.M. Carney Almroth, C.D. Collins, S. Cornell, C.A. de Wit, M.L. Diamond, ... & M.Z. Hauschild, 'Outside the Safe Operating Space of the Planetary Boundary for Novel Entities', 56(3) *Environmental Science & Technology* 1510-1521 (2002).

4 H. Ritchie and M. Roser, 'Forests and Deforestation'. OurWorldInData.org, 2021, <https://ourworldindata.org/forests-and-deforestation> (last accessed 24 April 2023).

5 J. Rockström, W. Steffen, K. Noone, Å. Persson, F.S. Chapin, III, E. Lambin, T.M. Lenton, M. Scheffer, C. Folke, H. Schellnhuber, B. Nykvist, C.A. De Wit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sörlin, P.K. Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R.W. Corell, V.J. Fabry, J. Hansen, B. Walker, D. Liverman, K. Richardson, P. Crutzen & J. Foley, 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity', 14(2) *Ecology and Society* 32 (2009).

6 United Framework Convention on Climate Change (UNFCCC), UN Doc FCCC/CP/2015/L.9/Rev.1 'Adoption of the Paris Agreement' (12 December 2015). <https://unfccc.int/process-and-meetings/the-paris-agreement> (last accessed 24 April 2023).

7 UN GA Resolution, A/RES/70/1, adopted by the General Assembly on 25 September 2015.

sulted in meaningful actions and improvements in various countries over the world. At the same time, the SDGs framework has been criticised for being under-ambitious, entrenched in a paradigm of growthism and ill-suited to enhance sustainability.<sup>8</sup> The high ambitions at the Sharm El-Sheikh climate change conference<sup>9</sup> to reach agreements about further reductions in carbon emissions have also been largely neglected.

Despite the limited achievements of contemporary (international) law and policies to address the current ecological crisis, the law remains a potentially powerful instrument to enhance sustainability and to address climate change and ecological damage. Global agreements and treaties but also domestic laws can create binding obligations on companies and governments and drive much needed action. While, traditionally, environmental law has been the main focus of environmental action, today we are witnessing an increased awareness that a wide variety of legal fields can contribute to the protection of the environment and increase sustainability. Private and commercial law, for example, can be reimagined as tools to create legally binding obligations to preserve natural habitats. Tort law can be leveraged to create liabilities for environmental or ecological damage, obliging polluters to pay compensation or undertake restoration. Criminal law may help to prosecute and deter major polluters, poachers and traders in natural resources and other environmental offenders. And even tax law, which has been often shaped to serve the interest of capital, can also become a powerful instrument to counteract damaging economic activities and to enhance a sustainable lifestyle. At a more fundamental level, using the law to save the planet requires attention to issues of substantive and procedural justice,<sup>10</sup> to establish new grounds for reinvigorated legal institutions acknowledging and protecting the rights of nature.

It is also worth noting how the law is being increasingly mobilised from the ground up. In recent years, citizens and NGOs have used the law to enforce climate action. Several initiatives for climate change litigation for not adhering to international agreements (particularly the Paris Agreement) emerged.<sup>11</sup> A remarkable example is the *Urgenda* case in the Netherlands, in which the Dutch state was ordered to reduce the emissions of greenhouse gases originating on Dutch territory to a certain level

within a year, to respect its human rights obligations.<sup>12</sup> Many other countries also saw similar cases brought to court. Moreover, after governments were sued, climate change litigation was also used to target corporations. In a historic ruling following a collective action of six (environmental) NGOs<sup>13</sup> together with 17,379 citizens, the The Hague court held Royal Dutch Shell liable for possible future environmental hazards and ordered this company to reduce its CO<sub>2</sub> emissions.<sup>14</sup> These are hopeful developments bearing witness to the fact that legal professionals can use their expertise to address climate change and ecological damage.<sup>15</sup> They can be part of NGOs (e.g. Urgenda, Client Earth, Stop Ecocide International) that have made it their mission to use the law to protect life on earth. But there are also more and more individual legal professionals, from academics to practising lawyers, who are orienting their efforts to reimagine laws to save the planet. For example, in June 2021, legal experts from across the world drafted a definition of 'ecocide',<sup>16</sup> which they hope will be adopted by the International Criminal Court. On 21 March 2023, the European Parliament's Committee on Legal Affairs unanimously voted for 'ecocide' to be condemned under EU law, with a definition that closely resembles the one proposed by the legal experts. On 28 March 2023, the European Parliament declared its support to include ecocide-level crimes in the European Union's revised Directive on protection of the environment through criminal law.<sup>17</sup> These developments follow a decade-long campaign, instigated by the late Polly Higgins, to demand that ecocide be recognised as a crime against humanity.

Using the law to save the planet will likely require thinking 'outside of the box' to enable courts to rule on cases about pollution and climate change based on human rights, government obligations or 'rights of nature'. At the same time, deploying different legal avenues to address climate change and ecological destruction raises questions, among others, about the underlying judicial principles and legal foundations that allow legal action to be taken by citizens, companies and governments. Another important question is whether and when the law is the most effective instrument to achieve change and what idiosyncratic limits exist.

In this special issue, academics from various legal and empirical disciplines have contributed to providing an

8 L.J. Kotzé, 'The Sustainable Development Goals: An Existential Critique alongside Three New-Millennial Analytical Paradigms', in D. French and L.J. Kotzé (eds.), *Sustainable Development Goals Law, Theory and Implementation* (2018) 41-65.  
 9 <https://enb.iisd.org/sharm-el-sheikh-climate-change-conference-cop27-summary> (last accessed 24 April 2023).  
 10 J. Gupta, D. Liverman, K. Prodan, et al. 'Earth System Justice Needed to Identify and Live within Earth System Boundaries,' *Nature Sustainability* (2023). Published online 2 March 2023. <https://doi.org/10.1038/s41893-023-01064-1> (last accessed 24 April 2023).  
 11 For an overview of climate change litigation cases, please see the *Global Climate Change Litigation Database*, which has been operational since 2011 and currently contains 686 cases from over 55 countries. <http://climatecasechart.com/> (last accessed 24 April 2023).

12 See [www.urgenda.nl/wp-content/uploads/ENG-Dutch-Supreme-Court-Urgenda-v-Netherlands-20-12-2019.pdf](http://www.urgenda.nl/wp-content/uploads/ENG-Dutch-Supreme-Court-Urgenda-v-Netherlands-20-12-2019.pdf) (last accessed 24 April 2023).  
 13 Action Aid NL, Both ENDS, Fossilvrij, Greenpeace NL, Jongeren Milieu Actief, Waddenvereniging.  
 14 [www.rechtspraak.nl/Organisatie-en-contact/Organisatie/Rechtbanken/Rechtbank-Den-Haag/Nieuws/Paginas/Royal-Dutch-Shell-must-reduce-CO2-emissions.aspx](http://www.rechtspraak.nl/Organisatie-en-contact/Organisatie/Rechtbanken/Rechtbank-Den-Haag/Nieuws/Paginas/Royal-Dutch-Shell-must-reduce-CO2-emissions.aspx) (last accessed 24 April 2023).  
 15 R. Cox, *Revolutie met Recht* (2011).  
 16 "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." Independent Expert Panel for the Legal Definition of Ecocide, June 2021.  
 17 [www.stopecocide.earth/breaking-news-2023/european-parliament-proposes-including-ecocide-in-eu-law](http://www.stopecocide.earth/breaking-news-2023/european-parliament-proposes-including-ecocide-in-eu-law) (last accessed 24 April 2023).

answer to whether, when and how *different fields of law* can be reimagined and mobilised as tools to enhance sustainability and address climate change and ecological damage. The contributions were initially presented and discussed at a seminar that was held at the Erasmus University Rotterdam in May 2022, in close collaboration with and financial support from the Erasmus Initiative on Dynamics of Inclusive Prosperity and the research initiative on Rebalancing Public & Private Interests of Erasmus School of Law. Together, the articles illustrate that most, if not all, fields of law can be reoriented and reimagined as legal tools to address climate change and ecological destruction.

The keynote lecture of the seminar,<sup>18</sup> by Marcos Orellana, the United Nations Special Rapporteur on Toxics and Human Rights, offered valuable reflections on the paradigmatic shifts needed for addressing the ‘triple crisis’ of pollution, climate change and biodiversity loss. In this address, Marcos Orellana took a critical stand towards international environmental law because of its ‘too diluted norms’: these ‘norms which do not oblige’ are leading to the incapacity of achieving its objectives. Orellana argued that the ‘state-centric’ approach of international environmental law needs to be injected with a rights-based approach. Throughout his talk, he used the surpassing of the planetary boundary of chemical pollution to illustrate international environmental law ‘ineffectiveness’, explaining how several conventions failed to address this sufficiently. He referred to the ways in which multilateral environmental agreements utilise national action plans or equivalents thereof to determine the contributions of each member state to the global mitigation goals. These offer states flexibility to cater to national circumstances and priorities. Orellana posited that this allows for ‘legalizing the gradual destruction of the planet’. The rights-based approach he proposed would then focus on, first, the right to science and, second, the right to a healthy environment. As to the former, he noted the ‘gulf existing between the science on chemicals and waste and the regulatory responses’. As further illustrated in his Report, the right to science is deemed essential to bridge this gap.<sup>19</sup> Notably, this gap is ‘no accident’, but the result of a ‘deliberate action against science and against scientists’, including delaying tactics of the industry when ‘faced with the prospect of regulation’. The right to science refers both to access to and dissemination of scientific results and to the inclusion of citizens, indigenous communities

and their knowledge and experiences in the scientific process. ‘Scientific knowledge is essential to confront and reverse the toxic pollution of the planet, but in order for those tools to be realised, science needs to be transformed into policy’. The right to science thus alludes to the importance of a science policy interface, which can be protected from corporate capture so that there are ‘no inappropriate financial relationships that would undermine the authority and confidence in science’. ‘Benefits to society do not occur without the translation of knowledge into actual policy ... and that is the link that we are missing’. As to the second right, to a clean, healthy and sustainable environment, Orellana remarks that this was only recognised by the Human Rights Council in October 2022, while it has, in fact, a much longer history at regional levels and in jurisprudence of human rights courts and bodies. He illustrated the importance of this right with examples of the disproportionate burden of pollution faced by indigenous communities. Moreover, he addressed the clean-up of historic pollution and repairing harms, for which he also sees an important role for the law. He explained that this right has both substantive and procedural elements to it, which he considered paramount to address the environmental crisis we face. He ended his keynote by asking the audience of lawyers to help answer the question of how the human rights-based approach can be injected into multilateral environmental agreements to change the dramatic trajectory of the status quo.

In the first article of this special issue, Frances Medlock and Robert White present a critical and radical view on the legal possibilities in (*international*) *criminal law* to address large-scale ecological damage and destruction. The authors plead for an ecocentric model of law and policy in which natural resources have their own value (and rights) aside from their instrumental value for human use. Based on this, the authors discuss three ways in which climate justice can be further developed: by using the ecocentric model and ‘rights of Nature’ in legal discourse, by adopting a general environmental duty of care, and by explicitly establishing the offence of ‘ecocide’ in (*international*) *criminal law*. Various existing and new ideas are synthesised to develop these three strands, together with illustrative cases. The term ‘ecocide’ is suggested for a broad range of actions and processes on a large geographic scale and emphasises the harm of the acts and not the illegality of it. This definitional strategy facilitates the criminalisation of companies and governments who intentionally damaged or enabled or allowed damage to accrue to complete ecosystems.

In the next article, Francesca Leucci addresses *liability and tort law* as a tool to deter business from engaging in conduct leading to large-scale ecological damage. An important problem in achieving this is the difficulty in quantifying environmental damage in ways that induce optimal deterrence. Drawing on law and economics, this article aims to investigate and evaluate several approaches to quantifying ecological damage. The article

18 M. Orellana, ‘The Unfinished Agenda of Stockholm 1972: A Rights Based Approach to International Environmental Law’, keynote lecture to the Conference Using the Law to Save the Planet, held at Erasmus School of Law in May 2022, [www.youtube.com/watch?v=YeFmOqjLouQ](https://www.youtube.com/watch?v=YeFmOqjLouQ) (last accessed 24 April 2023). In the following text, we use quotes and illustrations from his keynote address.

19 M. Orellana, A/HRC/48/61: *Right to Science in the Context of Toxic Substances – Report of the Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management and Disposal of Hazardous Substances and Wastes*. 2021. [www.ohchr.org/en/documents/thematic-reports/ahrc4861-right-science-context-toxic-substances-report-special](https://www.ohchr.org/en/documents/thematic-reports/ahrc4861-right-science-context-toxic-substances-report-special) (last accessed 24 April 2023).

innovates the field by showing how next to traditional methods to assess environmental damages, the field of ecological economics can offer novel ways to value nature. The author compared advantages, drawbacks and practical uses of these methods. While there appears to be no one-fits-all solution, and the most meaningful method may be determined based on the specificities of the case, the recently developed ecosystem service approach to damage assessment promises to offer accurate damage estimation of large-scale accidents.

The next two articles focus on *European laws and regulations*. Candice Foot offers a lucid analysis on a proposal of the European Commission for a new regulatory instrument that aims to address ecological damages of economic activities, the Proposal for a *Corporate Sustainability Due Diligence Directive*, particularly in relation to freshwater issues. This instrument would introduce an obligation for large EU companies to make sure that they will not harm human rights and the environment. The author observes that freshwater preservation is not an explicit part of this directive, while companies can do substantial damage to this and have caused substantial water pollution in the past. In this article, the ideas behind the draft are explained, and new ways to improve freshwater protection are explored. In its current form, the draft could achieve this only to a limited extent, owing to an unfortunate reformulation of the human right to water and an acritical transposition of international environmental obligations. The article concludes with various recommendations on how freshwater issues can be more comprehensively included in the Directive.

Maria Campo Comba investigates the potential and possibilities of *European competition law* to enable collaboration between companies to pursue sustainability goals and combat climate change. Agreements between competitors are generally prohibited, but cooperation among market actors pursuing sustainability objectives might fall under a cartel exception. The possibilities and conditions under which this is possible has been debated heavily in recent years. This article adds to this debate in various ways, by addressing the current assessment methods of agreements between companies and by adding a broader interpretation of the European legislation. Central to the discussion is an emphasis on the objectives of agreements themselves and their contribution to sustainability. Campo Comba argues that in particular agreements pursuing sustainability objectives that were not previously mandatory for the companies involved should be exempted from prohibition. Such an exception can be a powerful facilitator of investments and measures to combat climate change that would otherwise be avoided.

Seniha Irem Akin argues that it is necessary to use *corporate law* instead of relying on stakeholder theory to ensure that companies will take sustainability and environmental interests into account. Many companies already adopt environmentally sustainable corporate

strategies as they see it as their public duty. This is often justified by referring to the stakeholder theory, a management concept that was introduced almost 40 years ago. However, Akin demonstrates that there are several problems connected to this reasoning and argues that stakeholder theory is actually not the most optimal tool to integrate environmental sustainability into corporate activity. Instead, a legal reform in the area of corporate law focusing on the key concepts of corporate interest and directors' duties may better serve the job. This would also provide a more fundamental alternative for the European proposal on Sustainability Diligence Duty. In the next article, Laura Burgers and Kinanya Pijl address two legal innovations that may fundamentally change *private law* to support environmental sustainability. These are the Community Land Trust model, which adds a steward function to certain property rights, and the recently developed Zoöp model, trying to add non-human interests to corporate governance structures. A Community Land Trust is a non-profit and community-led organisation that typically develops and manages homes for low- and middle-income groups of the population. A Zoöp can be any organisation in which non-humans are represented on the board by someone working for a so-called Zoöconomic Foundation. The background and content of these innovations are further described as well as their actual application in the city of Amsterdam. Further, the authors evaluate the extent to which these legal innovations are supporting the well-being of humans as well as the environment on both a local and a global level. According to the authors, these innovations demonstrate that little change of the legal hardware of society is required for a meaningful change for the sustainability of the city and beyond.

The next two articles explore the possibilities of *tax law* to counteract environmental damage and enhance sustainability. Ilona van der Eijnde reviews three *fiscal policy measures* that have been taken or that have been initiated by the European Union and various member states to tax goods and services that are detrimental to the environment: a European carbon tax on imports, the Dutch air passenger tax and the Spanish tax on plastic packaging materials. Based on various indicators, the author reviews potential behavioural changes that could result from these measures and the existence of unintended side effects. It appears that the three measures have various shortcomings that limit their effects: they have conflicting objectives, are limited in scope and have exemptions that could lead to tax avoidance. Nor do the measures include an obligation to pass on the taxes to the consumer. Van der Eijnde provides various recommendations to increase the potential effect of these tax measures.

Arjen Schep, Anne Monsma and Robert Kastelein address the question of how *local taxes* can contribute to sustainability and pursuing climate goals. On the one hand, this can be accomplished through their primary purpose of funding government spending, for example by creating sustainable facilities, while, on the other hand, local taxes can provide financial incentives for

certain behaviour or make unsustainable behaviour more expensive. Several examples are described, mainly at the level of the municipality, but also related to provinces and water boards. These include property taxes, waste collection levies, betterment levies (e.g. to stimulate sustainable heating in houses), parking taxes and sewerage levies. The authors analyse the factors within the Dutch context that are limiting and that are contributing to the effectiveness of the use of local taxes in the pursuit of climate goals. The examples provided illustrate that local taxes do offer opportunities to contribute to climate goals. However, under the current legislative restrictions in the Netherlands, local taxes appear to play a modest role within the sustainability policy of local governments, also because taxes can be evaded if neighbouring local governments have different taxes.

Overall, the contributions to this special issue reveal different ways in which the law can be deployed or reimagined to combat climate change and environmental destruction and to stimulate sustainability and contribute to international climate goals. Possibilities can be found in multiple laws and legal arrangements and at different levels. The articles in this issue provide various examples of legal arrangements with potentially promising effects on sustainable behaviour and environmental conservation. At the same time, many of the existing arrangements appear to be limited in scope and effectiveness and face challenges in balancing environmental interests with those of trade and the economy. Together with technological innovation and changes in human attitudes and behaviour, adapting and fine-tuning legal arrangements may be pivotal in saving the planet. The contributions to this special issue show that there are many possibilities for doing that and, above all, we hope that they contribute to raising the awareness of the necessity to re-centre the law around sustainability. Hopefully, this special issue will provide inspiration and stimulate further research on the critical nexus of law, ecology and environmental justice.