



The Ecology of Justice: Reconstructing Environmental Law for the Anthropocene

Happy Okundaye Oji, LLB, BL, LLM

Legal Practitioner, Researcher in Environmental Law, Climate Justice and Indigenous Ocean Governance, Benin City, Edo State, Nigeria

Received: 15.05.2026 | Accepted: 20.06.2026 | Published: 21.06.2026

*Corresponding Author: Happy Okundaye Oji, LLB, BL, LLM

DOI: [10.5281/zenodo.20785427](https://doi.org/10.5281/zenodo.20785427)

Abstract

Original Research Article

The accelerating climate crisis, unprecedented biodiversity loss, ecosystem degradation, and increasing environmental vulnerability have exposed fundamental limitations within contemporary environmental law. Although environmental law has evolved significantly over the past half-century, much of its normative structure remains grounded in assumptions developed during an era in which ecological stability was largely taken for granted. Existing legal frameworks continue to prioritise regulatory control, resource management, and human-centred conceptions of environmental protection. While these approaches have contributed to important environmental achievements, they increasingly struggle to respond to the complex ecological realities of the Anthropocene.

This article argues that the challenges of the Anthropocene require more than stronger environmental regulations or improved governance mechanisms. They require a fundamental reconstruction of environmental law itself. Central to this reconstruction is the concept of the Ecology of Justice, a jurisprudential framework that understands justice as emerging from the relationships that connect human societies, ecological systems, future generations, and the broader community of life. Rather than treating environmental protection as an extension of human interests, the Ecology of Justice recognises ecological integrity as a foundational condition of justice itself.

Drawing upon climate justice scholarship, ecological jurisprudence, environmental ethics, Earth system governance, intergenerational justice theory, and contemporary developments in international environmental law, this article examines the inadequacy of anthropocentric legal frameworks in addressing planetary ecological crises. It develops an alternative normative approach grounded in ecological interdependence, relational responsibility, stewardship, and long-term environmental sustainability. The article contends that environmental law must evolve from a system primarily concerned with regulating environmental harm into one capable of sustaining the ecological relationships upon which collective wellbeing depends.

Ultimately, the article argues that the future of environmental law lies not in managing environmental decline but in reimagining law itself as a mechanism for maintaining ecological justice in an era of planetary change. The Ecology of Justice provides a framework through which environmental law may become more responsive to the realities of the Anthropocene and more capable of securing a just and sustainable future for present and future generations.

Keywords: Environmental Law, Ecology of Justice, Climate Justice, Anthropocene, Ecological Jurisprudence, Environmental Rights, Sustainability, Intergenerational Justice, Earth System Governance, Ecological Responsibility, Environmental Governance, Climate Change.



1. Introduction

The twenty-first century has witnessed an unprecedented convergence of environmental crises that challenge not only ecological stability but also the conceptual foundations of contemporary law. Climate change, biodiversity loss, ecosystem degradation, freshwater scarcity, soil depletion, deforestation, and increasing environmental vulnerability have collectively exposed the limitations of governance systems developed during a period when the resilience of the natural world was largely assumed rather than questioned.¹ The environmental challenges confronting humanity today differ fundamentally from many of those that shaped the emergence of modern environmental law. They are not isolated problems confined to particular locations or sectors of governance. Rather, they are interconnected manifestations of broader ecological transformations occurring on a planetary scale.

The concept of the Anthropocene has emerged as one of the most influential frameworks for understanding these transformations. Although scholars continue to debate its precise definition and chronology, the Anthropocene generally refers to a new geological epoch in which human activity has become a dominant force shaping the Earth's ecological systems.² Human actions now influence atmospheric composition, ocean chemistry, biodiversity patterns, hydrological cycles, and climatic processes in ways that rival or exceed many natural forces. The significance of this development extends beyond environmental science. It raises profound questions concerning responsibility, governance, justice, and the capacity of legal institutions to respond effectively to environmental change.

Environmental law occupies a central position within this challenge. Since the latter half of the twentieth century, environmental law has developed into a sophisticated body of national and international legal principles designed to regulate pollution, conserve biodiversity, manage natural resources, and protect environmental quality. Significant achievements have been realised through environmental treaties, domestic legislation, judicial intervention, and regulatory governance.³ Yet despite these advances, ecological decline continues across many regions of the world. Global greenhouse gas emissions remain dangerously high. Species extinction rates continue to accelerate. Ecosystem degradation increasingly threatens environmental stability. These realities suggest that the challenge confronting environmental law may not simply be one of implementation but also one of conceptual design.

Much of contemporary environmental law remains grounded in assumptions inherited from earlier legal traditions. Environmental protection is frequently justified because it safeguards human health, economic prosperity, property interests, or social welfare. Nature is protected because of its value to people rather than because ecological integrity is recognised as a foundational condition of justice itself.⁴ Such anthropocentric approaches have undoubtedly contributed to important environmental reforms. However, they increasingly struggle to address ecological challenges that reveal the profound interdependence between human societies and the natural systems upon which they depend.

Climate change illustrates this difficulty with particular clarity. The consequences of climate disruption cannot be understood solely through

¹ United Nations Environment Programme, *Making Peace with Nature* (UNEP 2021).

² Paul J Crutzen and Eugene F Stoermer, 'The Anthropocene' (2000) 41 *Global Change Newsletter* 17.

³ Philippe Sands, Jacqueline Peel, Adriana Fabra and Ruth Mackenzie, *Principles of International Environmental Law*

(4th edn, Cambridge University Press 2018).

⁴ Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (2nd edn, Routledge 2016).

conventional legal categories of harm, responsibility, and compensation. Climate change is not merely an environmental problem among many others. It is a systemic phenomenon that affects ecological relationships across multiple scales simultaneously. Rising temperatures influence biodiversity. Biodiversity loss weakens ecosystem resilience. Ecosystem degradation undermines food security, public health, and economic stability.⁵ The interconnected nature of these processes challenges legal frameworks that continue to organise environmental governance around fragmented regulatory categories.

The Anthropocene therefore demands a reconsideration of the relationship between law and ecology. Existing legal frameworks were largely developed within a worldview that treated humanity as separate from nature and environmental protection as an external constraint upon human activity. Increasingly, however, ecological science demonstrates that human wellbeing cannot be separated from ecological wellbeing. Human societies exist within ecological systems rather than outside them. The stability of those systems provides the conditions necessary for economic development, social order, public health, and political governance.⁶ Environmental degradation is consequently not simply a threat to nature; it is a threat to the foundations upon which human societies themselves depend.

It is within this context that the concept of the Ecology of Justice becomes particularly important. The Ecology of Justice represents a jurisprudential framework that seeks to reconstruct environmental law around the principle of ecological interdependence. Rather than treating environmental protection as a subsidiary concern within legal systems primarily organised around human interests, it understands ecological integrity as a prerequisite for justice itself. Justice is not viewed solely as a

matter of distributing rights, resources, or opportunities among individuals and communities. It also involves sustaining the ecological relationships that make human flourishing possible.⁷

The Ecology of Justice does not reject traditional concerns of environmental law. Pollution control, biodiversity conservation, climate mitigation, environmental rights, and sustainable development remain essential objectives. However, it argues that these objectives should be understood within a broader framework that recognises the ecological foundations of social and legal order. Environmental law must move beyond a narrow focus on regulating environmental harm and towards a deeper engagement with the ecological systems that sustain life across generations.⁸

This article develops the Ecology of Justice as a normative framework for reconstructing environmental law in the Anthropocene. It argues that contemporary ecological crises reveal the inadequacy of legal approaches grounded exclusively in anthropocentric assumptions and fragmented governance structures. In their place, the article proposes a framework based upon ecological interdependence, relational responsibility, stewardship, and intergenerational justice. Such a framework seeks not merely to improve environmental governance but to reimagine the very foundations upon which environmental law is constructed.

The article proceeds in five stages. Section Two examines the limitations of contemporary environmental law in the Anthropocene and explores why existing legal frameworks struggle to address planetary ecological challenges. Section Three develops the theoretical foundations of the Ecology of Justice as a new jurisprudential framework. Section Four analyses ecological interdependence and its implications for legal responsibility. Section Five explores the relationship between

⁵ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

⁶ Frank Biermann, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014).

⁷ David Schlosberg, *Defining Environmental Justice: Theories,*

Movements, and Nature (Oxford University Press 2007).

⁸ Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (United Nations University Press 1989).

environmental law and intergenerational justice. Section Six proposes practical pathways for reconstructing environmental governance through ecological principles. The final section concludes by arguing that the future of environmental law depends upon recognising that justice itself must become ecological if law is to remain relevant in an era of planetary change.

Ultimately, the central claim advanced in this article is straightforward yet profound. The environmental crises of the Anthropocene are not simply failures of regulation; they are failures of legal imagination. The future of environmental law depends upon its capacity to recognise that ecological integrity is not an optional policy objective but a foundational condition of justice. Reconstructing environmental law through an Ecology of Justice therefore represents not merely an academic exercise but an urgent necessity for a rapidly changing world.⁹

2. The Anthropocene and the Crisis of Contemporary Environmental Law

The emergence of the Anthropocene has fundamentally altered the context within which environmental law operates. Environmental governance systems developed during the twentieth century were largely designed to address discrete environmental problems such as pollution, habitat destruction, resource depletion, and industrial contamination. While these challenges remain significant, the Anthropocene presents a qualitatively different reality. Environmental degradation is no longer confined to isolated sectors or geographical regions. Instead, human activity now influences the functioning of the Earth's ecological systems at a planetary scale.¹⁰ The challenge confronting environmental law is therefore not simply one of managing environmental harm but of governing within an era characterised by profound ecological transformation.

The Anthropocene exposes a growing mismatch between ecological realities and legal structures. Environmental systems operate through complex interactions that transcend political boundaries, economic sectors, and regulatory categories. Climate change affects biodiversity. Biodiversity loss influences ecosystem resilience. Deforestation alters hydrological systems. Ocean warming affects atmospheric processes. These relationships illustrate that ecological systems function as interconnected wholes rather than as separate components.¹¹ Yet environmental law frequently remains organised around fragmented regulatory frameworks that address individual environmental problems in isolation. Climate law, biodiversity law, water law, forestry law, and pollution regulation often operate through separate legal regimes despite governing interconnected ecological processes.

This fragmentation reflects the historical evolution of environmental law. Most environmental statutes and international agreements were developed in response to specific environmental concerns. Pollution laws addressed industrial contamination. Wildlife legislation focused on species protection. Climate treaties sought to regulate greenhouse gas emissions. Such approaches were often effective in addressing particular problems. However, they were not designed to respond to systemic ecological transformations that simultaneously affect multiple dimensions of the Earth system.¹² As a result, environmental governance frequently struggles to address the cumulative and interconnected nature of contemporary ecological challenges.

Climate change provides perhaps the clearest example of this difficulty. The legal response to climate change has been dominated by efforts to reduce greenhouse gas emissions, encourage adaptation, and facilitate international cooperation. These objectives remain essential. Nevertheless, climate change increasingly reveals limitations

⁹ World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

¹⁰ Frank Biermann, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014).

¹¹ Fritjof Capra and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision* (Cambridge University Press 2014).

¹² Philippe Sands, Jacqueline Peel, Adriana Fabra and Ruth Mackenzie, *Principles of International Environmental Law* (4th edn, Cambridge University Press 2018).

within regulatory approaches that focus narrowly on emissions without adequately addressing broader ecological relationships. Rising temperatures affect ecosystems, food systems, public health, migration patterns, economic stability, and environmental security simultaneously.¹³ Climate change therefore functions not merely as an environmental issue but as a systemic challenge to governance itself.

A similar pattern is evident in relation to biodiversity loss. Contemporary biodiversity decline is occurring at a rate unprecedented in human history. Scientific assessments indicate that species extinction rates have accelerated dramatically as a result of habitat destruction, climate change, pollution, invasive species, and unsustainable resource exploitation.¹⁴ Despite decades of conservation efforts and international agreements, biodiversity loss continues across many ecosystems. This persistence suggests that existing legal frameworks may be addressing symptoms rather than underlying structural causes. Conservation measures often focus on protecting particular species or habitats while broader ecological pressures remain inadequately addressed.

The crisis of environmental law is therefore not simply a crisis of enforcement. It is also a crisis of legal imagination. Many environmental governance systems continue to be shaped by assumptions inherited from industrial-era legal thought. Nature is frequently conceptualised as a collection of resources to be managed, regulated, or conserved. Environmental protection is often justified because it supports human interests rather than because ecological integrity possesses independent normative significance.¹⁵ Such assumptions may be insufficient in an era where ecological instability threatens the very conditions that make social and economic life possible.

Anthropocentrism occupies a central place within this problem. Contemporary environmental law

remains predominantly human-centred in its orientation. Legal protections are frequently evaluated according to their contribution to human welfare, economic development, public health, or social stability. While these concerns are undoubtedly important, they often marginalise ecological relationships that cannot easily be translated into human interests. Ecosystems become valuable because of the services they provide rather than because of their role within broader ecological systems.¹⁶ The result is a legal framework that protects nature primarily through its usefulness to humanity rather than through recognition of ecological integrity as a foundational legal concern.

The Anthropocene challenges this perspective because it demonstrates that the distinction between human interests and ecological wellbeing is increasingly unsustainable. Human societies depend upon stable climatic conditions, healthy ecosystems, fertile soils, functioning hydrological systems, and biological diversity. When these systems are degraded, social and economic consequences inevitably follow. Ecological decline therefore undermines the very interests that anthropocentric legal frameworks seek to protect.¹⁷ Environmental law consequently faces a paradox: by treating ecology as secondary to human interests, it may inadvertently weaken the ecological foundations upon which those interests depend.

Another limitation of contemporary environmental law concerns temporality. Political and legal institutions often operate within relatively short time horizons. Electoral cycles, regulatory priorities, and economic planning frequently focus upon immediate concerns rather than long-term ecological consequences. The Anthropocene, however, is characterised by processes that unfold over decades, centuries, and even millennia. Greenhouse gases emitted today may influence climatic conditions far

¹³ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

¹⁴ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), *Global Assessment Report on Biodiversity and Ecosystem Services* (IPBES 2019).

¹⁵ Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (2nd edn, Routledge

2016).

¹⁶ David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press 2007).

¹⁷ John Rockstrom and others, 'A Safe Operating Space for Humanity' (2009) 461 *Nature* 472.

into the future. Species extinction is irreversible. Ecosystem collapse may require generations to repair, if recovery is possible at all.¹⁸ Existing legal frameworks often struggle to accommodate such temporal realities because they remain oriented towards present interests and immediate outcomes.

The challenge of scale further complicates environmental governance. Environmental problems now occur simultaneously at local, national, regional, and global levels. Climate change is a planetary phenomenon, yet its impacts are experienced locally. Biodiversity loss may originate from local decisions but produce global consequences. Pollution generated in one jurisdiction may affect communities far beyond its source.¹⁹ Traditional governance systems organised around territorial sovereignty frequently struggle to address such multi-scalar challenges. The Anthropocene therefore raises fundamental questions concerning the adequacy of legal frameworks based primarily upon jurisdictional boundaries and fragmented authority.

These difficulties have led many scholars to argue that environmental law requires more than incremental reform. Strengthening enforcement mechanisms, increasing regulatory standards, and improving institutional coordination remain important objectives. However, such measures may be insufficient if the conceptual foundations of environmental law remain unchanged. The ecological crises of the Anthropocene suggest the need for a deeper transformation in how law understands its relationship with the natural world.²⁰

The concept of the Ecology of Justice emerges from this context. It begins with the recognition that environmental problems are not external challenges confronting otherwise stable legal systems. Rather, they reveal fundamental shortcomings within legal frameworks that fail to recognise ecological

interdependence. The crisis of environmental law is therefore not merely a regulatory failure; it is a failure to understand justice in ecological terms. Reconstructing environmental law requires moving beyond fragmented, anthropocentric, and short-term approaches towards a framework capable of recognising the interconnected character of ecological systems and the responsibilities arising from human dependence upon them.

The Anthropocene does not render environmental law irrelevant. On the contrary, it makes environmental law more important than ever. Yet it also demands that environmental law evolve. The next section develops the theoretical foundations of this transformation by examining the concept of the Ecology of Justice and exploring how it provides a new jurisprudential framework for environmental governance in an era of planetary change.²¹

3. From Environmental Protection to Ecological Justice

The preceding discussion demonstrated that the environmental crises of the Anthropocene expose significant limitations within contemporary environmental law. Climate change, biodiversity loss, ecosystem degradation, and planetary instability increasingly reveal the inadequacy of legal frameworks developed primarily to regulate discrete environmental harms. These challenges invite a more fundamental question: what conception of justice should guide environmental law in an era where ecological stability itself can no longer be taken for granted? Answering this question requires moving beyond traditional models of environmental protection towards a broader framework grounded in ecological justice.²²

Environmental protection has long been the dominant objective of environmental law.

¹⁸ Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (United Nations University Press 1989).

¹⁹ World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

²⁰ Nicholas A Robinson, 'Environmental Law: The Next

Generation' (1991) 22 *Environmental Law* 1441.

²¹ Paul J Crutzen, 'Geology of Mankind' (2002) 415 *Nature* 23.

²² Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (2nd edn, Routledge 2016).

Throughout the twentieth century, legal systems sought to control pollution, conserve natural resources, protect wildlife, and regulate environmentally harmful activities. These efforts produced significant achievements. Air and water quality improved in many jurisdictions, protected areas expanded, environmental impact assessment became widely adopted, and international environmental agreements established important standards for environmental governance.²³ Environmental law emerged as one of the most dynamic and influential fields of contemporary legal practice.

Yet despite these accomplishments, environmental degradation continues on an alarming scale. Climate disruption intensifies. Species extinction accelerates. Ecosystems decline. Environmental vulnerability increases across many regions of the world. These realities suggest that environmental protection, while necessary, may no longer be sufficient as the organising principle of environmental law. Protecting the environment from harm remains essential, but the Anthropocene demands a deeper understanding of the relationship between law, ecology, and justice.²⁴

One reason for this inadequacy lies in the conceptual foundations of traditional environmental protection. Environmental law has often been constructed around the idea that environmental problems are external threats requiring legal intervention. Pollution, habitat destruction, and resource depletion are treated as undesirable outcomes that law must regulate and minimise. While this approach has produced important regulatory tools, it frequently assumes that ecological systems exist separately from human societies and that environmental protection can be pursued without fundamentally rethinking the structures that generate environmental harm.²⁵

The Anthropocene challenges this assumption. Contemporary ecological crises demonstrate that environmental degradation is not merely the result of isolated acts of pollution or resource misuse. It reflects deeper patterns of economic organisation, governance, legal reasoning, and social development that have treated ecological systems as subordinate to human interests. Climate change is not simply an emissions problem. Biodiversity loss is not merely a conservation problem. They are manifestations of broader failures to recognise humanity's dependence upon ecological systems.²⁶ Environmental law therefore requires a framework capable of addressing these underlying relationships rather than merely regulating their consequences.

The concept of ecological justice provides such a framework. Ecological justice differs from conventional approaches to environmental protection because it focuses not only on preventing environmental harm but also on maintaining the ecological relationships necessary for collective wellbeing. It recognises that justice cannot be fully achieved within societies experiencing ecological collapse, environmental instability, or declining ecosystem resilience. Ecological integrity is not an optional environmental objective; it is a precondition for the realisation of social, economic, and political justice.²⁷

This perspective expands traditional understandings of environmental justice. Early environmental justice movements concentrated primarily on the unequal distribution of environmental burdens among human communities. Questions of environmental racism, pollution exposure, resource access, and procedural fairness became central concerns. These contributions remain indispensable and continue to shape contemporary environmental law. However, ecological justice broadens the scope of inquiry by recognising that environmental harms also affect the ecological systems upon which all communities

²³ Philippe Sands, Jacqueline Peel, Adriana Fabra and Ruth Mackenzie, *Principles of International Environmental Law* (4th edn, Cambridge University Press 2018).

²⁴ United Nations Environment Programme, *Making Peace with Nature* (UNEP 2021).

²⁵ Nicholas A Robinson, 'Environmental Law: The Next

Generation' (1991) 22 *Environmental Law* 1441.

²⁶ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

²⁷ David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press 2007).

depend.²⁸ Justice therefore involves not only fairness among people but also the maintenance of ecological conditions that make human flourishing possible.

The Ecology of Justice emerges from this broader understanding. It is founded upon the principle that ecological relationships possess legal and moral significance. Human societies do not exist independently of ecological systems. They are embedded within complex networks of relationships involving climate systems, biodiversity, water cycles, soils, forests, oceans, and countless other ecological processes. These relationships sustain life, support economies, enable social organisation, and make governance possible. The degradation of these systems consequently threatens not only environmental quality but also the foundations of justice itself.

A central feature of the Ecology of Justice is its emphasis on relational thinking. Traditional legal frameworks often focus upon individual actors, discrete harms, and clearly identifiable responsibilities. Ecological systems operate differently. Environmental outcomes frequently emerge through cumulative interactions among multiple actors, institutions, and processes. Climate change, for example, cannot be attributed to a single source or resolved through isolated interventions.²⁹ It arises through relationships connecting energy systems, economic structures, governance institutions, consumption patterns, and ecological processes.³⁰ Understanding justice in such contexts requires attention to relationships rather than isolated events.

Relational thinking also transforms understandings of environmental responsibility. Conventional legal approaches frequently assign responsibility according to direct causation, ownership, or jurisdiction. While these principles remain

important, ecological justice recognises that responsibility may also arise from participation within systems of ecological dependence. Human societies benefit continuously from ecological functions they neither create nor control. Stable climates, fertile soils, biodiversity, and ecosystem services provide essential conditions for collective wellbeing. These benefits generate corresponding responsibilities towards the ecological systems that sustain them.³¹

The Ecology of Justice further emphasises stewardship as a guiding legal principle. Stewardship differs from approaches centred primarily on control, exploitation, or resource allocation. It recognises that present generations hold ecological systems in trust for future generations and possess obligations to maintain environmental integrity over time. Such obligations are particularly important in the Anthropocene, where environmental decisions often produce consequences extending far beyond immediate political and economic horizons.³² Stewardship therefore links ecological responsibility with intergenerational justice and long-term sustainability.

Importantly, ecological justice does not require abandoning human-centred concerns. Human rights, social justice, economic development, and environmental protection remain vital components of contemporary legal systems. The Ecology of Justice seeks not to replace these concerns but to situate them within a broader ecological context. Human wellbeing and ecological wellbeing are not competing objectives. They are mutually dependent realities. Environmental law must therefore move beyond false distinctions between human interests and ecological interests and recognise the interconnected nature of both.³³

Recent developments within legal scholarship

²⁸ Robert D Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality* (3rd edn, Westview Press 2000).

²⁹ Fritjof Capra and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision* (Cambridge University Press 2014).

³⁰ Frank Biermann, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014).

³¹ Edith Brown Weiss, *In Fairness to Future Generations:*

International Law, Common Patrimony and Intergenerational Equity (United Nations University Press 1989).

³² World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

³³ David R Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the Environment* (UBC Press 2012).

suggest growing recognition of these ideas. Ecological jurisprudence, Earth system governance, rights-of-nature movements, sustainability theory, and intergenerational justice scholarship all reflect efforts to rethink the relationship between law and ecology. Although these approaches differ in important respects, they share a common insight: legal systems must become more responsive to ecological realities if they are to remain effective in the Anthropocene.³⁴ The Ecology of Justice seeks to contribute to this emerging conversation by providing a framework through which environmental law may be reconstructed around principles of ecological interdependence, responsibility, and stewardship.

Ultimately, the transition from environmental protection to ecological justice represents more than a change in legal terminology. It reflects a shift in legal consciousness. Environmental law can no longer be satisfied with limiting environmental harm while leaving intact the assumptions that generate ecological instability. The challenge of the Anthropocene requires a more ambitious vision—one that recognises ecological integrity as a foundational component of justice itself. The next section develops this argument further by examining ecological interdependence and exploring how it transforms conventional understandings of legal responsibility and environmental obligation.³⁵

4. Ecological Interdependence and the Reconstruction of Legal Responsibility

One of the most significant insights emerging from contemporary ecological science is that life on Earth exists through relationships of profound interdependence. No ecosystem functions in isolation. Forests influence atmospheric conditions. Oceans regulate climate systems. Biodiversity supports ecological resilience. Rivers connect

landscapes across vast geographical regions. Human societies, far from existing separately from these processes, depend upon them for survival, prosperity, and stability.³⁶ The Anthropocene has made this reality impossible to ignore. Environmental crises increasingly demonstrate that ecological disruption in one part of the Earth system frequently produces consequences elsewhere, often in ways that transcend political boundaries and legal jurisdictions.

Despite this reality, many legal systems continue to operate according to assumptions that reflect a far more fragmented understanding of the world. Responsibility is commonly assigned through concepts such as territorial jurisdiction, ownership, direct causation, and individual accountability. These principles have long provided the foundation for legal decision-making and remain essential to the functioning of contemporary governance. However, they are often poorly suited to environmental challenges characterised by cumulative impacts, complex ecological interactions, and long-term consequences.³⁷ Climate change illustrates this difficulty with exceptional clarity.

The causes and consequences of climate change are dispersed across multiple actors, institutions, and generations. Greenhouse gas emissions produced in one country contribute to environmental harms experienced elsewhere. Decisions taken today may influence climatic conditions decades into the future. Environmental degradation often results from the cumulative effects of countless activities rather than a single identifiable action. Such realities challenge conventional legal frameworks that seek clear lines of responsibility and direct causal relationships.³⁸ The problem is not that traditional legal principles are entirely irrelevant, but that they are increasingly insufficient when applied to ecological systems that operate through interconnected processes.

³⁴ Cormac Cullinan, *Wild Law: A Manifesto for Earth Justice* (2nd edn, Green Books 2011).

³⁵ Paul J Crutzen and Eugene F Stoermer, 'The Anthropocene' (2000) 41 *Global Change Newsletter* 17.

³⁶ Fritjof Capra and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision* (Cambridge University Press 2014).

³⁷ Philippe Sands, Jacqueline Peel, Adriana Fabra and Ruth Mackenzie, *Principles of International Environmental Law* (4th edn, Cambridge University Press 2018).

³⁸ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

Ecological interdependence therefore compels a reconsideration of legal responsibility itself. If environmental systems function through relationships rather than isolated events, responsibility must also be understood relationally. The Ecology of Justice advances precisely this argument. It contends that responsibility arises not only from direct acts of harm but also from participation within ecological systems upon which human wellbeing depends. Human societies benefit continuously from ecological processes that provide clean air, stable climates, fertile soils, biodiversity, and water security. These benefits generate corresponding obligations towards the maintenance of the systems that sustain them.³⁹

This perspective marks a significant departure from conventional approaches to environmental responsibility. Traditional legal frameworks frequently focus on liability after environmental harm has occurred. Environmental regulation seeks to prevent pollution, while compensation mechanisms attempt to remedy damages once they arise. Although such measures remain important, they are inherently reactive. Ecological interdependence suggests the need for a more proactive understanding of responsibility grounded in prevention, stewardship, and long-term ecological care.⁴⁰ The objective is not merely to respond to environmental harm but to maintain the ecological conditions that make harm less likely to occur in the first place.

The principle of stewardship occupies a central place within this reconstructed understanding of responsibility. Stewardship recognises that environmental governance involves obligations extending beyond immediate economic interests and political priorities. Ecological systems are not simply assets to be managed according to present preferences. They constitute the environmental

foundations upon which future opportunities and collective wellbeing depend.⁴¹ Present generations therefore possess responsibilities not only to one another but also to future generations whose lives will be shaped by the environmental decisions made today.

Climate change demonstrates the urgency of this perspective. Contemporary societies benefit from activities that contribute to greenhouse gas emissions while many of the most severe consequences will be experienced by future generations. Existing legal frameworks often struggle to address this temporal dimension because responsibility is typically organised around present actors and immediate harms. Ecological interdependence reveals that such approaches are inadequate. Environmental responsibility must extend across time as well as space. The consequences of ecological degradation do not respect generational boundaries, and legal responsibility must evolve accordingly.⁴²

Ecological interdependence also challenges the assumption that environmental responsibility is exclusively human-centred. Environmental law has traditionally focused upon protecting people from environmental harm or regulating human interactions with natural resources. Yet ecological systems possess significance that extends beyond their direct utility to human societies. Biodiversity contributes to ecosystem resilience. Healthy forests regulate climate and water cycles. Wetlands provide ecological functions essential to broader environmental stability.⁴³ Protecting such systems is not merely a matter of safeguarding human interests; it is a matter of maintaining the ecological relationships that sustain life itself.

This broader understanding of responsibility aligns closely with developments in ecological jurisprudence. Ecological jurisprudence argues that

³⁹ Frank Biermann, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014).

⁴⁰ Nicholas A Robinson, 'Environmental Law: The Next Generation' (1991) 22 *Environmental Law* 1441.

⁴¹ Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (2nd edn, Routledge 2016).

⁴² Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (United Nations University Press 1989).

⁴³ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), *Global Assessment Report on Biodiversity and Ecosystem Services* (IPBES 2019).

legal systems should be informed by ecological principles rather than treating ecology as an external consideration. Law should reflect the realities of ecological interdependence rather than attempting to govern environmental systems through assumptions derived from industrial-era models of governance.⁴⁴ The Ecology of Justice builds upon this insight by proposing that responsibility should be understood as relational, ecological, and intergenerational in character.

The practical implications of this approach are significant. Environmental governance would no longer be evaluated solely according to its capacity to regulate harmful conduct. It would also be assessed according to its contribution to ecological resilience, environmental sustainability, and long-term system stability. Policymaking would increasingly emphasise precaution, prevention, and stewardship. Environmental rights would be complemented by environmental responsibilities. Governance institutions would be encouraged to consider cumulative ecological impacts rather than isolated regulatory concerns.⁴⁵

The concept of relational responsibility further strengthens connections between environmental law and climate justice. Climate justice has traditionally focused upon unequal contributions to climate change and unequal exposure to its consequences. These concerns remain essential. However, ecological interdependence broadens the scope of climate justice by highlighting the shared responsibilities arising from collective dependence upon ecological systems. Justice is not merely a matter of distributing burdens fairly. It is also a matter of sustaining the environmental relationships that make justice possible.⁴⁶

Importantly, recognising ecological interdependence does not diminish the importance of individual accountability or state responsibility. Rather, it

situates these concepts within a broader framework capable of addressing systemic environmental challenges. States remain responsible for environmental governance. Corporations remain accountable for environmentally harmful activities. Individuals continue to possess obligations towards sustainable conduct. Yet these responsibilities are understood within a wider network of ecological relationships that transcend traditional legal boundaries.⁴⁷

The reconstruction of legal responsibility proposed here therefore reflects a broader transformation in legal thought. The Anthropocene requires law to move beyond assumptions of separation and control towards an understanding of governance grounded in ecological connection and mutual dependence. Environmental responsibility can no longer be conceived solely in terms of ownership, jurisdiction, or direct causation. It must also encompass stewardship, ecological care, and obligations arising from participation within interconnected systems of life.

This insight provides the foundation for the next stage of the analysis. If ecological interdependence transforms understandings of responsibility, it also transforms understandings of obligation across time. The next section therefore examines intergenerational justice and explores how environmental law can respond to the rights, interests, and wellbeing of future generations in an era of unprecedented ecological uncertainty.⁴⁸

5. Intergenerational Justice and the Rights of the Future

Few challenges illustrate the limitations of contemporary legal systems more clearly than the question of future generations. Law has traditionally been concerned with regulating relationships among

⁴⁴ Cormac Cullinan, *Wild Law: A Manifesto for Earth Justice* (2nd edn, Green Books 2011).

⁴⁵ Rio Declaration on Environment and Development (1992) UN Doc A/CONF.151/26 (Vol I), Principle 15.

⁴⁶ Henry Shue, *Climate Justice: Vulnerability and Protection* (Oxford University Press 2014).

⁴⁷ David R Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the Environment* (UBC Press 2012).

⁴⁸ World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

existing persons, institutions, and states. Rights, obligations, duties, and liabilities are generally structured around present actors and immediate legal interests. Yet the ecological crises of the Anthropocene reveal that many of the most significant consequences of contemporary decision-making will be experienced by individuals who do not yet exist. Climate change, biodiversity loss, ecosystem degradation, and resource depletion are not merely present-day concerns. They are processes that will shape environmental conditions for generations to come.⁴⁹ The challenge confronting environmental law is therefore not only how to address existing environmental harms but also how to safeguard the rights and interests of future generations whose wellbeing depends upon decisions made today.

The significance of this challenge cannot be overstated. Human societies have always influenced future generations through their actions, but the scale and permanence of contemporary environmental change are unprecedented. Greenhouse gases emitted today may remain in the atmosphere for centuries. Species driven to extinction cannot be recovered. Ecosystems that collapse may require generations to regenerate, if recovery remains possible at all. Rising sea levels, altered climatic conditions, and biodiversity decline will continue to affect human societies long after current policymakers, governments, and institutions have disappeared.⁵⁰ Environmental law therefore operates within a temporal context far broader than that contemplated by many traditional legal frameworks.

The concept of intergenerational justice emerged in response to this reality. Intergenerational justice is founded upon the principle that present generations owe obligations to future generations and that environmental governance should account for the

long-term consequences of contemporary actions.⁵¹ It challenges legal systems to recognise that environmental resources, ecological stability, and planetary resilience are not assets belonging exclusively to the present generation. Rather, they constitute a form of ecological inheritance that must be preserved, protected, and transmitted across time.

Environmental law has increasingly incorporated elements of intergenerational thinking. Sustainable development, precautionary governance, biodiversity conservation, and climate adaptation all reflect concerns regarding future wellbeing. International environmental instruments frequently acknowledge obligations towards future generations, while courts in several jurisdictions have begun recognising the importance of long-term environmental stewardship.⁵² Nevertheless, the practical implementation of intergenerational justice remains limited. Many legal systems continue to prioritise short-term economic and political objectives despite their long-term environmental consequences.

One explanation for this limitation lies in the structure of contemporary governance itself. Political institutions are often organised around relatively short time horizons. Electoral cycles typically span only a few years. Economic planning frequently focuses upon immediate growth and development objectives. Regulatory frameworks are commonly designed to address present concerns rather than ecological conditions decades into the future.⁵³ Such arrangements may be adequate for many forms of governance, but they are poorly suited to environmental challenges characterised by long-term ecological consequences.

Climate change illustrates this tension vividly. The benefits of activities that contribute to greenhouse gas emissions are often experienced in the present,

⁴⁹ Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (United Nations University Press 1989).

⁵⁰ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

⁵¹ Edith Brown Weiss, 'Our Rights and Obligations to Future Generations for the Environment' (1990) 84 *American*

Journal of International Law 198.

⁵² Rio Declaration on Environment and Development (1992) UN Doc A/CONF.151/26 (Vol I), Principle 3; World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

⁵³ Frank Biermann, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014).

while many of the most severe consequences are deferred into the future. This temporal disconnect creates powerful incentives for inaction or delay. Political leaders may avoid difficult environmental decisions because the costs of action are immediate while the benefits may not become apparent for many years. Future generations, lacking political representation within contemporary governance systems, are consequently vulnerable to decisions made without adequate consideration of their interests.⁵⁴

The Ecology of Justice responds to this problem by placing intergenerational responsibility at the centre of environmental law. It begins from the recognition that ecological systems constitute a shared inheritance extending across generations. Present generations enjoy the benefits of environmental conditions they did not create. Stable climates, functioning ecosystems, biodiversity, fertile soils, and freshwater systems are the result of ecological processes that predate contemporary societies. These benefits impose corresponding responsibilities. Just as current generations inherited ecological systems from the past, they possess obligations to preserve ecological integrity for those who will inherit the Earth in the future.⁵⁵

This understanding transforms conventional approaches to environmental responsibility. Environmental obligations are no longer confined to preventing immediate harm or complying with existing regulations. They also encompass duties to maintain ecological conditions necessary for future wellbeing. Responsibility therefore extends beyond present relationships and incorporates obligations towards individuals who cannot yet participate in political or legal processes. Such an approach challenges legal systems to think beyond immediate interests and consider the long-term consequences of environmental decision-making.⁵⁶

Intergenerational justice also strengthens the connection between environmental law and ecological sustainability. Sustainability is often described as meeting present needs without compromising the ability of future generations to meet their own needs. While this formulation has become widely accepted, it frequently remains abstract in legal practice. The Ecology of Justice provides a more concrete foundation by linking sustainability directly to questions of justice and responsibility. Environmental sustainability is not merely a policy preference. It is a requirement of fairness between generations.⁵⁷

The rights of future generations have increasingly attracted scholarly and judicial attention in recent years. Courts in several jurisdictions have acknowledged that environmental degradation may affect the rights of young people and future generations. Climate litigation has increasingly relied upon arguments grounded in intergenerational equity, environmental rights, and long-term ecological protection.⁵⁸ These developments reflect growing recognition that environmental governance must account for temporal dimensions of justice that extend beyond traditional legal frameworks.

However, the Ecology of Justice argues that future generations require more than symbolic recognition. Effective intergenerational justice demands structural changes in environmental governance. Decision-making processes should incorporate long-term ecological assessments. Environmental impact evaluations should consider intergenerational consequences. Climate governance should be guided by principles that prioritise ecological resilience over short-term gains. Legal institutions must increasingly recognise that environmental degradation often constitutes a transfer of costs from present generations to future ones.⁵⁹

Ecological interdependence reinforces this

(4th edn, Cambridge University Press 2018).

⁵⁷ World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

⁵⁸ Neubauer et al v Germany; Urgenda Foundation v State of the Netherlands.

⁵⁹ United Nations Environment Programme, *Making Peace with*

⁵⁴ Henry Shue, *Climate Justice: Vulnerability and Protection* (Oxford University Press 2014).

⁵⁵ Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (2nd edn, Routledge 2016).

⁵⁶ Philippe Sands, Jacqueline Peel, Adriana Fabra and Ruth Mackenzie, *Principles of International Environmental Law*

argument. Future generations will inherit not only environmental resources but also the consequences of ecological disruption. Climate instability, biodiversity loss, degraded ecosystems, and diminished environmental resilience will shape their opportunities, wellbeing, and capacity for development. Environmental justice therefore requires attention to temporal relationships as well as spatial ones. Just as justice demands fairness among contemporary communities, it also requires fairness between present and future generations.⁶⁰

The Anthropocene makes this obligation particularly urgent. Human influence upon ecological systems has reached a scale at which contemporary actions can alter environmental conditions for centuries. This reality fundamentally transforms the ethical and legal responsibilities of present generations. Environmental law can no longer be satisfied with addressing immediate harms alone. It must become a framework capable of safeguarding ecological continuity across time.

Ultimately, intergenerational justice reveals that environmental law is not merely concerned with the management of present environmental conditions. It is also concerned with the kind of world that will be inherited by future generations. The Ecology of Justice insists that this inheritance must be understood as a matter of justice rather than charity, foresight, or political discretion. Future generations possess legitimate claims to ecological conditions that enable human flourishing and environmental stability. The protection of those conditions therefore becomes one of the most important responsibilities of contemporary environmental law.⁶¹

This conclusion has important implications for governance more broadly. If environmental law must protect the interests of future generations, then existing institutions may require significant reform. The next section therefore explores how environmental governance itself can be

reconstructed through the Ecology of Justice and examines practical pathways for creating legal systems capable of responding to the ecological realities of the Anthropocene.⁶²

6. Reimagining Environmental Governance Through the Ecology of Justice

The preceding sections have argued that the environmental crises of the Anthropocene expose profound weaknesses within contemporary environmental law. Climate change, biodiversity loss, ecological degradation, and increasing environmental vulnerability reveal the limitations of governance systems founded upon fragmented regulation, anthropocentric assumptions, and short-term decision-making. If environmental law is to respond effectively to these challenges, it must move beyond merely regulating environmental harm and towards a more comprehensive framework capable of sustaining ecological integrity. The Ecology of Justice provides such a framework. It offers a foundation for reimagining environmental governance in ways that reflect the realities of ecological interdependence, intergenerational responsibility, and planetary change.⁶³

Environmental governance has traditionally focused upon the management of specific environmental problems. Governments enact pollution controls, establish protected areas, regulate resource extraction, and implement conservation programmes. These measures remain important and have achieved significant successes. However, the Anthropocene reveals that environmental challenges increasingly transcend the institutional boundaries through which governance is organised. Climate change influences biodiversity. Biodiversity loss affects ecosystem resilience. Ecosystem degradation undermines food security, water systems, public health, and economic stability. Environmental

Nature (UNEP 2021).

⁶⁰ David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press 2007).

⁶¹ David R Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the*

Environment (UBC Press 2012).

⁶² Paul J Crutzen and Eugene F Stoermer, 'The Anthropocene' (2000) 41 *Global Change Newsletter* 17.

⁶³ Frank Biermann, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014).

governance can no longer afford to treat such issues as separate concerns.⁶⁴

The Ecology of Justice begins by recognising that governance must be organised around ecological relationships rather than isolated environmental problems. Ecological systems function through networks of interaction connecting species, ecosystems, climatic processes, and human communities. Governance structures should therefore reflect this interconnected reality. Policies addressing climate change, biodiversity conservation, water management, land use, and sustainable development should be understood as components of a broader ecological framework rather than as independent regulatory domains.⁶⁵

This shift requires a corresponding transformation in legal priorities. Contemporary environmental governance often remains reactive in nature. Legal intervention typically occurs after environmental harm has been identified or ecological damage has become apparent. Pollution is regulated after contamination occurs. Species receive protection after populations decline. Climate adaptation measures are introduced after environmental impacts become visible.⁶⁶ While reactive governance remains necessary in some contexts, the Ecology of Justice emphasises the importance of preventative governance. The objective should not simply be to respond to environmental crises but to maintain ecological conditions that prevent such crises from emerging in the first place.

The precautionary principle occupies a central role within this approach. Precaution reflects the recognition that environmental uncertainty should not justify inaction where ecological risks are potentially serious or irreversible. In the Anthropocene, uncertainty has become a defining characteristic of environmental governance.

Ecological systems are increasingly subject to rapid and unpredictable change. Governance institutions must therefore be capable of acting before environmental damage becomes irreversible.⁶⁷ The Ecology of Justice supports precaution not merely as a regulatory tool but as a manifestation of broader responsibilities arising from ecological interdependence and stewardship.

Environmental rights also assume renewed significance within this framework. Over recent decades, environmental rights have become increasingly prominent within constitutional law, human rights law, and environmental governance. Such rights recognise that environmental quality is closely connected to human dignity, health, wellbeing, and social justice.⁶⁸ Yet the Ecology of Justice argues that environmental rights should be understood within a broader ecological context. Rights are essential because they protect individuals and communities from environmental harm. However, rights alone are insufficient if the ecological systems upon which those rights depend continue to deteriorate. Environmental rights must therefore be complemented by environmental responsibilities directed towards sustaining ecological integrity.

This broader conception of governance places stewardship at the centre of legal decision-making. Stewardship differs from conventional models of environmental management because it emphasises care, responsibility, and long-term ecological continuity rather than control and exploitation. Present generations act not as owners of ecological systems but as custodians entrusted with their protection and transmission to future generations.⁶⁹ Such an approach is particularly important in the context of climate change, where environmental decisions frequently produce consequences extending far beyond immediate political and

⁶⁴ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

⁶⁵ Fritjof Capra and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision* (Cambridge University Press 2014).

⁶⁶ Nicholas A Robinson, 'Environmental Law: The Next Generation' (1991) 22 *Environmental Law* 1441.

⁶⁷ Rio Declaration on Environment and Development (1992)

UN Doc A/CONF.151/26 (Vol I), Principle 15.

⁶⁸ David R Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the Environment* (UBC Press 2012).

⁶⁹ Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (2nd edn, Routledge 2016).

economic interests.

The Ecology of Justice further supports the development of Earth system governance. Earth system governance recognises that environmental challenges increasingly occur at scales that exceed traditional jurisdictional boundaries. Climate change, biodiversity decline, ocean degradation, and ecological instability are global phenomena requiring coordinated responses across multiple levels of governance.⁷⁰ Existing institutions remain largely organised around state sovereignty and territorial authority. While states continue to play indispensable roles, effective governance increasingly requires cooperation among governments, international organisations, scientific institutions, Indigenous communities, civil society actors, and local governance systems.

Such cooperation should not be understood merely as a matter of administrative efficiency. It reflects the reality that ecological interdependence generates shared responsibilities that cannot be adequately discharged through isolated action. The Ecology of Justice therefore encourages governance structures capable of fostering collaboration, knowledge-sharing, and collective environmental stewardship. Ecological challenges are rarely confined to a single jurisdiction, and governance systems must evolve accordingly.⁷¹

A particularly important implication concerns environmental decision-making. Contemporary governance often prioritises economic growth, resource utilisation, and short-term development objectives. Environmental considerations may be incorporated into decision-making, but they frequently remain secondary to broader economic goals. The Ecology of Justice challenges this hierarchy. It argues that ecological integrity should be regarded as a foundational condition of sustainable development rather than as one interest

among many competing priorities.⁷² Economic and social development remain important objectives, but they must be pursued within ecological limits rather than at their expense.

This perspective also strengthens the relationship between governance and justice. Environmental governance has often been criticised for prioritising technical solutions while neglecting questions of fairness, participation, and representation. The Ecology of Justice rejects this separation. Ecological sustainability and social justice are mutually reinforcing rather than competing objectives. Effective governance must therefore address both ecological resilience and distributive fairness simultaneously. Communities affected by environmental decisions should participate meaningfully in governance processes, while governance institutions must remain attentive to the unequal distribution of environmental burdens and benefits.⁷³

Importantly, reimagining environmental governance does not require abandoning existing legal institutions. International environmental treaties, domestic legislation, regulatory agencies, and judicial mechanisms remain essential components of environmental governance. The challenge is one of transformation rather than replacement. Existing institutions must evolve to reflect ecological realities more effectively and to incorporate principles of interdependence, stewardship, precaution, and intergenerational responsibility into their decision-making processes.⁷⁴

Ultimately, the Ecology of Justice offers a vision of environmental governance grounded in ecological awareness rather than ecological reaction. It seeks to move environmental law beyond a narrow focus on managing environmental decline towards a broader project of sustaining the ecological conditions necessary for justice, wellbeing, and collective

⁷⁰ Frank Biermann and others, 'Navigating the Anthropocene: Improving Earth System Governance' (2012) 335 *Science* 1306.

⁷¹ World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

⁷² United Nations Environment Programme, *Making Peace with*

Nature (UNEP 2021).

⁷³ David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press 2007).

⁷⁴ Philippe Sands, Jacqueline Peel, Adriana Fabra and Ruth Mackenzie, *Principles of International Environmental Law* (4th edn, Cambridge University Press 2018).

flourishing. In the Anthropocene, governance can no longer be concerned solely with regulating human impacts upon nature. It must also become a means of maintaining the ecological relationships that make human life possible.

This transformation represents one of the most significant challenges facing contemporary legal systems. Yet it is also one of the most important opportunities. The Anthropocene has exposed the limitations of inherited approaches to environmental governance. The Ecology of Justice provides a framework through which environmental law may respond to these realities and contribute to the creation of more resilient, equitable, and ecologically sustainable futures. The final section draws together the article's arguments and considers the broader implications of reconstructing environmental law for the Anthropocene.⁷⁵

7. Conclusion: Towards an Ecology of Justice

The Anthropocene has transformed the context within which environmental law operates. Climate change, biodiversity loss, ecosystem degradation, and growing ecological instability have exposed the inadequacies of legal frameworks developed during an era when environmental challenges were often perceived as isolated problems capable of resolution through sector-specific regulation. Contemporary ecological crises reveal a different reality. Environmental harm is increasingly systemic, interconnected, and planetary in scope. It affects not only ecosystems but also the social, economic, political, and legal structures that depend upon ecological stability for their continued existence.⁷⁶ The challenge confronting environmental law is therefore not merely one of improving regulation but of rethinking its foundational assumptions.

This article has argued that contemporary environmental law remains constrained by conceptual frameworks that are increasingly ill-

suited to the realities of the Anthropocene. Despite significant achievements in pollution control, conservation, and environmental governance, many legal systems continue to operate within anthropocentric models that treat ecological systems primarily as objects of management or sources of human benefit. Such approaches have undoubtedly generated important environmental protections. However, they struggle to address environmental crises that reveal the profound interdependence between human societies and the ecological systems upon which they depend.⁷⁷

The central contribution of this article has been the development of the Ecology of Justice as a normative framework for reconstructing environmental law. The Ecology of Justice begins from a simple but transformative proposition: ecological integrity is not merely an environmental objective but a foundational condition of justice itself. Human wellbeing, social stability, economic prosperity, and political governance all depend upon functioning ecological systems. Justice cannot therefore be understood solely in terms of relationships among individuals, communities, or states. It must also encompass the ecological relationships that sustain collective life across generations.⁷⁸

The article has demonstrated that ecological interdependence challenges traditional understandings of environmental responsibility. Climate change, biodiversity decline, and ecosystem degradation reveal that environmental outcomes emerge through complex relationships connecting human actions, governance systems, and ecological processes. Legal responsibility must therefore evolve beyond narrow conceptions of causation and liability towards broader frameworks grounded in stewardship, precaution, and relational obligation. Such an approach recognises that participation within ecological systems generates responsibilities as well as benefits.⁷⁹

⁷⁵ Paul J Crutzen, 'Geology of Mankind' (2002) 415 *Nature* 23.

⁷⁶ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

⁷⁷ United Nations Environment Programme, *Making Peace with*

Nature (UNEP 2021).

⁷⁸ David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press 2007).

⁷⁹ Klaus Bosselmann, *The Principle of Sustainability:*

Intergenerational justice has been identified as a particularly important dimension of this transformation. The environmental decisions made today will shape ecological conditions for decades, centuries, and potentially millennia. Future generations will inherit not only the benefits of contemporary development but also the consequences of ecological degradation. Environmental law therefore possesses an inherently temporal dimension that extends beyond present interests and immediate political priorities. The Ecology of Justice insists that obligations towards future generations are not matters of charity or political discretion. They are requirements of justice arising from humanity's shared dependence upon ecological continuity.⁸⁰

The article has further argued that environmental governance must be reconstructed to reflect ecological realities more effectively. Governance systems organised around fragmented regulatory structures, short-term decision-making, and jurisdictional boundaries often struggle to address environmental challenges characterised by complexity and interdependence. The Ecology of Justice offers an alternative vision based upon ecological stewardship, Earth system governance, precautionary decision-making, and long-term sustainability. Such an approach does not require abandoning existing legal institutions but rather transforming them so that ecological integrity becomes a guiding principle of governance rather than a secondary consideration.⁸¹

A recurring theme throughout this analysis has been the relationship between ecology and justice. Environmental law has often treated environmental protection as a specialised field concerned primarily with regulating environmental harm. The Anthropocene demonstrates that this understanding is no longer sufficient. Environmental degradation

affects the conditions under which rights can be exercised, communities can flourish, economies can function, and future generations can thrive. Ecological collapse is therefore not simply an environmental problem; it is a justice problem. Reconstructing environmental law requires recognising this reality and embedding ecological considerations within the core of legal reasoning itself.⁸²

The significance of this argument extends beyond environmental law. The Ecology of Justice ultimately represents a broader challenge to contemporary legal thought. It questions assumptions that have long shaped legal understandings of responsibility, governance, development, and human relationships with the natural world. It calls for a jurisprudence capable of recognising ecological limits, respecting environmental interdependence, and sustaining the conditions necessary for collective flourishing. In this sense, the Ecology of Justice is not merely a theory of environmental governance. It is a theory of how law itself must evolve in response to planetary change.⁸³

The future of environmental law will not be determined solely by technological innovation, international agreements, or regulatory reform, important though these developments remain. Its future will depend equally upon whether legal systems can develop conceptual frameworks capable of responding to the ecological realities of the Anthropocene. The challenges of climate change, biodiversity loss, and environmental degradation require more than new rules. They require a new understanding of justice.

The Ecology of Justice offers one possible foundation for that understanding. By recognising ecological integrity as a prerequisite for justice, it provides a framework through which environmental

Transforming Law and Governance (2nd edn, Routledge 2016).

⁸⁰ Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (United Nations University Press 1989).

⁸¹ Frank Biermann, *Earth System Governance: World Politics*

in the Anthropocene (MIT Press 2014).

⁸² David R Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the Environment* (UBC Press 2012).

⁸³ Cormac Cullinan, *Wild Law: A Manifesto for Earth Justice* (2nd edn, Green Books 2011).

law may move beyond the management of environmental decline towards the creation of legal systems capable of sustaining ecological resilience, social wellbeing, and intergenerational continuity. In an era defined by environmental uncertainty, few tasks are more urgent. The reconstruction of environmental law is therefore not merely an academic project. It is an essential component of humanity's broader effort to secure a just and sustainable future in the Anthropocene.⁸⁴

AUTHOR BIOGRAPHY

Happy Okundaye Oji, LLB, BL, LLM, is a Nigerian legal practitioner, environmental law scholar, and researcher whose work focuses on climate justice, environmental governance, environmental rights, ecological jurisprudence, sustainability law, and international environmental law. His scholarship examines the evolving relationship between law, justice, and ecological systems in the Anthropocene, with particular emphasis on the reconstruction of environmental governance through principles of ecological responsibility, intergenerational justice, and sustainability. He is the author of several scholarly publications on climate justice, environmental governance, and ocean law, including *Customary Marine Tenure and the Limits of State-Centric Ocean Governance in Nigeria: A Climate Justice Perspective* (2026). His current research seeks to develop innovative jurisprudential frameworks capable of advancing environmentally sustainable and socially just legal responses to global ecological challenges.

REFERENCES

Biermann F, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014).

Biermann F and others, 'Navigating the Anthropocene: Improving Earth System Governance' (2012) 335 *Science* 1306–1307.

Bosselmann K, *The Principle of Sustainability: Transforming Law and Governance* (2nd edn, Routledge 2016).

Boyd DR, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the Environment* (UBC Press 2012).

Bullard RD, *Dumping in Dixie: Race, Class, and Environmental Quality* (3rd edn, Westview Press 2000).

Capra F and Luisi PL, *The Systems View of Life: A Unifying Vision* (Cambridge University Press 2014).

Crutzen PJ, 'Geology of Mankind' (2002) 415 *Nature* 23.

Crutzen PJ and Stoermer EF, 'The Anthropocene' (2000) 41 *Global Change Newsletter* 17–18.

Cullinan C, *Wild Law: A Manifesto for Earth Justice* (2nd edn, Green Books 2011).

Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC 2023).

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Global Assessment Report on Biodiversity and Ecosystem Services* (IPBES 2019).

Oji HO, 'Customary Marine Tenure and the Limits of State-Centric Ocean Governance in Nigeria: A Climate Justice Perspective' (2026) 4(6) *GAS Journal of Arts Humanities and Social Sciences*.

Rio Declaration on Environment and Development (1992) UN Doc A/CONF.151/26 (Vol I).

Robinson NA, 'Environmental Law: The Next Generation' (1991) 22 *Environmental Law* 1441–1465.

Sands P, Peel J, Fabra A and Mackenzie R, *Principles of International Environmental Law* (4th edn, Cambridge University Press 2018).

Schlosberg D, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press 2007).

⁸⁴ World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).

Shue H, *Climate Justice: Vulnerability and Protection* (Oxford University Press 2014).

United Nations Environment Programme, *Making Peace with Nature: A Scientific Blueprint to Tackle the Climate, Biodiversity and Pollution Emergencies* (UNEP 2021).

Weiss EB, *In Fairness to Future Generations: International Law, Common Patrimony and*

Intergenerational Equity (United Nations University Press 1989).

Weiss EB, 'Our Rights and Obligations to Future Generations for the Environment' (1990) 84 *American Journal of International Law* 198–207.

World Commission on Environment and Development, *Our Common Future* (Oxford University Press 1987).