We were inspired to take on the project of this collection as a result of our teaching. Our undergraduate and graduate experience has brought home to us the need for a research methodology aid that could double up as a teaching companion, bringing together radical and innovative approaches to researching environmental law. Frequently in our teaching, the experience of approaching environmental law in what we consider a research-rich, quite radical, hands-on and dedicated interdisciplinary way, has given rise to enthusiastic cries of ‘eureka’ uttered by teachers and students alike.

These ‘eureka’ moments tend to call into question the suitability of traditional environmental law methods in answering the urgent questions of how, whether and for whom the environment ought to be protected and regulated. Such moments occur with increasing regularity as the Anthropocene generation come to reflect on their role in bringing about, as well as in changing, the course of this epoch. The implication of this reflection is the need for ‘interventions’ in both teaching and research practice in the field of environmental law scholarship. Education is one of the key fora for the beginning, as well as the staging of such interventions. But we are also aiming at filling a gap in the market in terms of new, material, grounded, embodied research methodologies that will encourage current and prospective environmental law researchers to consider some different approaches. We hope that this collection will be a worthy companion for students, teachers and researchers.

**INTERVENTIONS**

Traditional ways of conceiving environmental law and of accounting for the problems brought about through anthropocentric means, have led to a reinstatement of the problem of environmental degradation, without however the possibility of imagining different avenues of resolving it.

* We would like to thank Maria Javed for her hard and dedicated work in helping us put together this volume.
What we suggest here is, essentially, a new imaginary. It has become clear from our teaching practice that students are ready to be immersed in such radical approaches to the environment. It has also become clear, largely due to a wave of publications and even entire journals (reference to most of which can be found in this volume), that environmental law is changing and has become ever more ready to embrace different paradigms. This readiness has convinced us that such a collection is far from untimely. It might be ‘different’, ‘radical’, even obscure for some, but it is certainly necessary and hopefully future-capturing. The collection aims to create a liminal space where radical, free-thinking and adventurous theoretical approaches occupy both the page and the classroom, the text and the field, and to provide interdisciplinary ‘tools’ and ‘methods’ for these necessary ‘interventions’ in the field of environmental law scholarship.

We see this collection as an articulation and a furthering of the methodological trajectories already created by the plentiful and rich voices currently constituting the field of environmental law scholarship. We build on these because of their enduring relevance, proven solidity and established effectiveness. These trajectories have attempted to deal with the urgency of the issues associated with environmental degradation, rampant anthropocentrism, and the advent of the Anthropocene epoch. These ‘intervention-ready’ approaches have provided us with the base on which to build the theoretically diverse methodological strategies included in this volume. In accounting for the means by which these strategies emerge, we assemble these approaches under three headings: ‘radically researching and thinking environmental law’, ‘regulation, rights and jurisprudence’, and ‘activism and pedagogy’. To situate this collection as a tool for implementing and performing these methodological strategies as innovative scholarly steps into the field of environmental law, we now trace across these intervention-ready apexes.

RADICALLY RESEARCHING AND THINKING ENVIRONMENTAL LAW

Although this volume takes up a vanguard position in its radical and different theoretical vision, it would be a mistake to think of it in isolation. Rather, it adds to existing theoretical adventurousness in methodological strategy already undertaken by a diverse and courageous body of theoretically informed environmental law scholarship. Critical legal and socio-legal scholarship has embraced the theoretical (spatial, embodied and generally material) turns, and we have seen the iteration of bodies, spaces and atmospheres as law’s environment, variously described as environmental
Research methods in environmental law

‘heterotopias’,1 ‘lawscape’,2 ‘nomospheres’,3 and so on. This has caused environmental legal research to question the violence of law’s ontological position, and consequently frame it as situated, embodied, and socially and politically implicated.4 Inevitably, this has brought about inquiries on recent considerations by the humanities and social sciences of the role and agency of non-human and inhuman materialities.5 On riding the wave of feminism6 and post-humanism,7 legal ontologies have become increasingly fluid,8 watery,9 vegetal,10 animal,11 and even mineral.12 There is now significant tension surrounding such terms as ‘sustainability’ and ‘climate

10 Emanuele Cocia, La Vie des Plantes (Rivages, 2016).
change', since it can hardly be doubted that the human body ought not to be the privileged subject and sole beneficiary of environmental law.

Theoretical innovation demands the dissolution of disciplinary boundaries in ‘thinking’ as well as practising environmental law. The necessity of interdisciplinarity in environmental law research, scholarship and teaching has been resolutely asserted.14 We can no longer consider environmental law as the exclusive domain of jurists and doctrinal scholars, but rather a discipline which must be studied alongside and incorporating ecology, sociology, geography, geopolitics, economics, biology, politics, embodiment, and even art. This has meant that the ‘discipline’ of environmental law, as well as the terms which define the field, have been the object of scrutiny. The term ‘environment’ has itself been a stage of etymological interventions15 that manifestly show the rootedness of environmental law in the human subject, but take it even further to post-human and more-than-human interventions, which conceptualise the environment as a whole as acentric and more-than-human.16

Accepting more-than-human agents as the subject and even makers of environmental law, questions the validity and applicability of environmental law’s jurisprudential schema. Research in the field of environmental law

has rightly doubted the ability of such a schema to regulate and protect the diverse range of bodies that push at the limits of humanly and legally sketched subjects. This, in turn, has called for an alternative to the much-critiqued anthropocentric jurisprudential schema in environmental law.17 The terms that define the environmental legal agenda have also been framed as ‘hyperobjects’ and as transcending spatio-temporal specificity,18 thereby intensifying the urgency for intervention, and the need for understanding the conditions of the environmental dilemmas defining the epoch of the Anthropocene. Indeed, the Anthropocene refreshes the demand to turn to the law and legal responsibility, and radically reconceive the human–environment interface in order to answer the call for radical ‘dramatic regulatory intervention’.19

REGULATION, RIGHTS AND JURISDICTION

Innovative approaches to researching and thinking environmental law reveal the limits of the anthropocentric environmental law, and render them formidable and in need of robust intervention. These interventions must take place within the practice of environmental law, thereby disrupting the terms which have been found inadequately to define the various environmental legal subjects. Environmental legal scholarship has already undertaken a valiant effort to disrupt and question the potentially problematic anthropocentric application of such terms as regulation, rights and jurisdiction.20 Rights become the legal embodiments of the tensions between the competing and urgent demands of all bodies to the

body of environmental law.\textsuperscript{21} Such claims demand to be methodologically translated into strategies for policy-makers to address the competing interests of bodies, including traditionally ‘human’ notions, such as ‘dignity’.\textsuperscript{22} Interventions have also been framed as very real, embodied, situated protests.\textsuperscript{23} Environmental law scholarship and research often takes as its object the practice of policy-making,\textsuperscript{24} and attempts to create spaces and strategies for policy changes at a constitutional level,\textsuperscript{25} often through comparative methods that help effect change locally and globally.\textsuperscript{26}

Environmental degradation can no longer be considered to be confined to a jurisdiction. The environment has become the responsibility of local, regional, transnational and international jurisdictions. However, tensions occur in the relationship between the scales of global and local environments and their accompanying competing agendas and values. Environmental law scholarship has increasingly been interrogated through radical postcolonial and third world approaches,\textsuperscript{27} particularly in relation


\textsuperscript{24} Karen Morrow, ‘Peoples’ Sustainability Treaties at Rio+20: Giving Voice to the Other’ in Michelle Maloney and Peter Burdon (eds), \textit{Wild Law – In Practice} (Routledge, 2014) pp.45–57.


to the urgency of such matters as water supply and sanitation demands, medication and climate change. We have now entered a time where interventions are urgently needed in terms of traditional assertions of boundaries, privileging of geographically and politically-limiting jurisdiction, and the environmental legitimacy and effectiveness of regulatory frames such as the EU legal order.

Existing regulatory mechanisms designed to bring about change, however, often cause disproportionate suffering for certain sectors of the planet. It is the responsibility of environmental law scholarship to develop practical strategies to guide policy-making, and one important way of doing this is through a more holistic and socially-embedded environmental education.

ACTIVISM AND PEDAGOGY

Education is a significant point of intervention, both in terms of forming and adopting, pedagogical strategies for change for a justice-seeking student body. Both the student body and the research-inspired teaching community increasingly find themselves engaged with technology and ever more complex ‘networks’ of more-than-human bodies. Ontological

34 See scholarship developing Actor Network Theory, which is drawing out the realities and implications of some of these networks, for example: Emilie Cloatre and N Wright, ‘A Socio-legal Analysis of an Actor-world: The Case of Carbon Trading and the Clean Development Mechanism’ (2012) Journal of Law and
movements supported by radical thinking and research in environmental law scholarship also underline the need for the same kind of thinking to be transferred into university curricula. Indeed, with such a complex network of diverse bodies needing the consideration of environmental law, there is a commensurate demand for radical ways of occupying the academic agenda.35 This ‘occupation’ calls for courageous forms of pedagogic activism that would aim to empower practitioners of (and for) the future, whether they enter environmental law as lawyers, researchers, activists or mere beings walking the surface of this planet.36

In our commitment to mobilise various interventions in environmental law’s jurisprudential schema, this collection brings together theoretically informed possibilities for method to carry these interventions into the situated understanding and eventual disruption of current environmental law. Critical, radical and innovative approaches to environmental law become timely tools, and it is our aim to inspire readers to adopt such methodologies for their research and even their teaching. In the volume, environmental law is analysed from doctrinal as well as theoretical perspectives, all of which follow, as well as produce, particular methodological trajectories and pedagogical strategies, which become the basis of urgent interventions in what is acknowledged to be environmental law’s problematic grounding.

THIS COLLECTION

The chapters in this volume do not aim at an exhaustive list of the potential methodologies that have been and can be used in the future in


relation to environmental law. On the contrary, they offer what we hope are novel and exciting horizons of possibility for new environmental legal research. Some of them might appear alien, difficult or even cumbersome. But we ask you to persevere and to press on, embracing the interdisciplinarity and radical lines of flight that the chapters offer, whether they draw on more established and tested methodologies or whether they break new ground for environmental legal methodologies. This is the reason we have invited authors from a diverse disciplinary pool that, apart from law, includes geography, art, anthropology, political theory, philosophy, and so on. The one thing that runs through every chapter and has determined the vision of the whole collection, is the appetite to embrace new research methodologies, which will bring the discipline of environmental law in sync with the interdisciplinary, embodied, emplaced, material kind of theoretical research that has been characterising the rest of social sciences and humanities this past decade.

For this very reason, the volume begins with a closer look at materiality as a broad methodological perspective. Materiality entails taking seriously the material (rather than immaterial, disembodied, mainly linguistic) aspects of the law, and refusing to see environmental law as a merely discursive discipline. We look at the materiality of the human but also the nonhuman through the lenses of material vulnerability in the context of critical environmental law (Anna Grear); the materiality of constructivist devices such as legal documents, actor-network theory (ANT) understandings of nature, and the mapping of regulatory onto physical space (Bettina Lange); the materiality of abstraction itself, seen through space, legal (linguistic) abstractions, and even urban theatrical aesthetics (Andrea Pavoni); the material structure of ANT, Science and Technology Studies (STS), and ethnography, illustrated through the case of biopiracy (Emilie Cloatre); complexity theory as a tool for the study of micro and macro behaviours in terms of rights of individuals, corporations and the environment as a whole (Lucy Finchett-Maddock); and the materiality of critical environmental legal grammar and methodology in the face of the Anthropocene (Andreas Philippopoulos-Mihalopoulos).

The volume then zooms in on a particular aspect of materiality that in a way augured the whole material turn, namely space and the spatial turn. This is because space is very close to issues of environmental protection: there can be no environmental degradation which is despatialised and no environmental measure that does not determine the space to which it refers, whether local, regional, global or even planetary. We adopt a broad conception of spatiality, from the geographic to the more conceptual, to the jurisdictional. We begin with a polemic take on the necessity of spatial considerations for environmental law through vegetal life, temporality
Introduction

and more-than-human democratisation (Robyn Bartel); moving on to the opportunities for environmental justice and environmental activism that open up with developing collective case studies across a geographical spread (Jane Holder and Donald McGillivray); to the Third World Approaches to International Law (TWAIL) take on environmental law seen from a historical but also strategic perspective in terms of a theoretical construct that will help the global South (Usha Natarajan); to a global environmental constitutionalism seen from a comparative perspective, and the potential for more globally oriented environmental measures (Francois Venter and Louis Kotze); to the place-based work of human geographers and how their insights on spatial methodologies can be used in environmental law (Josephine Gillespie).

The next part of the book deals with established ways of thinking about environmental law but presented through new or not yet established methodologies. The connecting thread is a confluence between ecology and economics, at least in the form of such issues as sustainability and precaution, mixed with strong political and/or activist positions about what needs to be done and how. We begin with what one would expect by now to be an absolutely established methodology, namely ecofeminism, but against which there is still considerable resistance, because of its emplaced, activist and indeed status-quo threatening implications (Karen Morrow); moving on to anarchist methodologies and how they can be translated into environmental law through activist research, such as ethnography, and resistance to liberal environmental greening agendas (Peter Burdon and James Martel); to a novel understanding of change that is holistic rather than neoliberal and capitalist, through the revisiting of the Foucauldian methodological toolbox and particularly the research practice of genealogy (Andreas Kotsakis); to a methodological fusion of systems theory and discourse analysis applied on the principle of precaution with the double aim of bringing systems theory and critical theory closer, and suggesting new ways of environmental evidence seeking (John Paterson); to the tools of social communication and reflexivity as the way to put some distance between traditional forms of environmental legal protection and engage with new understandings of risk society and semantics as forces of change (Inger-Johanne Sand); to end with a stentorian call for a return to a post-ontological, indeed ecological, epistemology and to ‘nature’ through a set of aesthetic and ethical methods (Ben Woodard).

The final part of the volume deals with the spectrum of the human/nonhuman/inhuman in line with what have been widely hailed as post-humanism, and are now also being thought of as more-than-human, methodologies. We close the volume with this empty throne, once occupied by Man (in his full gendered presence), reigning over what used to be an
indisputably anthropocentric discipline, and is now moving full-speed to an acentred, flat and fractal continuum between anthropos and planet. We begin with a performative piece of methodological experimentation, where the limits between human and animal (as well as humane/inhumane, public/private, sacred/profane) are being redrawn through a differently imagined, caring and not always destructive, gently gendered law (Edward Mussawir and Yoriko Otomo); slowly moving to the beat of the breath in the coral autoethnography of the diver, in full aquatic and methodological immersion of an oceanic life-law that exposes the fallacy of biometrics and biopolitics (Irus Braverman); to the methodological challenge of flat ecology of Spinozan/Deleuzian assemblages that work immanently towards a post-human environmental justice, as applied in the law and politics of CO₂ control (mirko nikolić); to the reimagined world of the natural contract by Michel Serres, but also his more recent work on Biogea, where the usual distinctions between subject and object or culture and nature collapse (Danilo Mandic); before finally closing with a call to the courage of the autoethnographic researcher and the methodological necessity to occupy academic ethical agendas in the field (Victoria Brooks).