1. From ‘marginality’ to ‘mainstream’: the evolution of teaching and learning in environmental law

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Why produce a book on teaching environmental law? There are three principal reasons that we offer.

First, environmental law has emerged since the 1970s as a widely embraced component of the undergraduate law curriculum in many countries. It is also a specific focus within numerous postgraduate legal studies and research programs. Whether it has become a part of the mainstream of legal education or remains a marginal component is open to debate, and the answer may vary from one country to another. We examine this matter further below, but, irrespective of the conclusion, this development in itself justifies a specific examination of the teaching of environmental law. We believe that this book is the first to be devoted entirely to the subject of teaching environmental law and hope that it will provide both inspiration and practical guidance to legal scholars who are seeking to take up, or improve, their teaching of this subject. We also hope that it will encourage further discussion and debate amongst environmental law scholars about how best to do so.

Second, there is a widespread recognition amongst environmental law scholars that teaching environmental law involves a number of distinctive challenges. Arguably, the inherent characteristics of environmental problems create more acute challenges for environmental law teaching than for many other legal subjects. Environmental law is of great scope and it is hard to delineate clear boundaries for the subject. The law changes rapidly, forced by advances in scientific knowledge, technological processes and political concern. In many nations, environmental law presents as a predominantly statute-based subject – which creates its own pedagogical challenges – but environmental scholars also have to contend with the legal relevance of policy, planning instruments and other forms of ‘soft law’. The emergence of environmental law principles (such as sustainable development and the precautionary principle) create a tension between legal formalism and new approaches to

legal reasoning. In addition, alongside these challenges, the subject is characterised by great factual complexity, bringing into play interdisciplinarity and the need to consider the relationship between law and science, law and economics, and law and socio-cultural concerns. Accordingly, determining the purpose, scope and content of the subject can prove challenging. As a result, it is desirable to examine the difficulties that teachers may encounter in designing and delivering an environmental law course and how best to address these. We will elaborate further on these challenges later in this chapter. Many of the contributions also do so and provide suggestions as to how to overcome them.

Third, environmental law has provided a vehicle in a number of countries for considerable innovation in legal teaching methodology. Whether this innovation is a necessary response to the distinctive nature of the subject (e.g., its interdisciplinary and polycentric characteristics) is also a matter for debate, and these are explored further in this introduction. Irrespective of the reasons for such innovation, the presentation in this book of a range of distinctive teaching methodologies that reach beyond the entrenched, lecture-based paradigm for legal education may inspire their adoption more widely, not only by environmental law teachers but also, where appropriate, in other subjects within the general law curriculum. In this respect, an examination of environmental law teaching may provide some constructive insights for legal teaching methodology more generally.

SOME PRELIMINARY QUALIFICATIONS

In presenting this introduction, and in editing the contributions to this book, we have been conscious of the need to avoid generalised statements and assumptions that ignore differing circumstances across the world of legal education. In particular, we acknowledge that the conditions for the provision of legal education, including environmental law, vary considerably around the world and that some of the teaching methodologies described in the following chapters may be difficult or impossible to adopt, or even to relate to, where resources and facilities are inadequate. Our aim, in presenting these methodologies, is not to provide a prescriptive template for how to teach an environmental law course. Rather, we seek to present a range of methodological alternatives to the lecture-based paradigm that are particularly suited to the teaching of environmental law and which may serve to help environmental law teachers to think differently about what they do, and why. It is possible that many of these methodologies may be utilised elsewhere in the legal curriculum where circumstances permit.

We note also that the contributions to this book largely reflect experience with the teaching of environmental law in Western, developed countries. This was not a deliberate editorial choice but rather an unintended consequence

of the manner in which we have assembled the book. While we ‘commissioned’ several chapters in order to ensure a treatment of some fundamental aspects of the general topic, most have come from a response to our call for contributions. The quality and quantity of this response has been impressive, reflecting a commendable vitality and commitment within the international community of environmental law scholars to the teaching of the discipline. We note however, with regret, that we have not succeeded in attracting many suitable contributions from environmental law scholars working in countries with a developing or emerging economy. Whether this reflects the marginality of environmental law within the legal curriculum in these countries, a shortage of scholars experienced in environmental law teaching and scholarship, a lack of confidence on the part of these scholars in submitting contributions, or other factors, is unclear. Whatever the reasons, there is a critical need to explore further the particular opportunities and challenges related to the teaching of environmental law in these parts of the world.

Finally, we acknowledge that a shortage of legal scholars with appropriate expertise in environmental law may constitute a significant impediment to the teaching of the subject in some countries, especially those with less developed economies.¹ It is not possible for a book of this nature to address this significant problem, as the solution lies primarily in providing access for legal scholars, particularly those from developing countries, to training or a formal, postgraduate education in environmental law. Nevertheless, we hope that this book can serve as a guide and inspiration to those who are relatively new to the teaching of environmental law, wherever they may be located, especially as they set about the challenging task of developing a course on the subject for the first time.

THE STRUCTURE AND CONTENTS OF THIS BOOK

We have allocated the 18 selected contributions to five separate Parts, with the aim of providing a coherent and logical order to their presentation. This will also enable readers to choose, if they wish, which contributions to focus on more closely.

Part I comprises three contributions that reflect on the values-based and emotional dimensions of environmental law. In Chapter 2, Lynda Collins and Brandon Stewart explore how to engender hope in students confronting the impacts of climate change. In Chapter 3, Karen Bubna-Litic argues for the adoption of a values-based approach to teaching environmental law that serves to inspire students. In Chapter 4, Estair Van Wagner adopts a somewhat con-

¹ For a description of the challenges in this regard in Thailand, see Ch.18.

trary perspective by suggesting that there is a need to provide some discomfort to students in a natural resources law course through place-based learning that involves an effort to ‘decolonise’ its teaching.

These contributions provide differing perspectives in the environmental law context on some broader questions concerning the general approach to legal education. On the one hand, environmental law intertwines inescapably with values-based ideas and perspectives that are difficult, and arguably undesirable, for environmental law teachers to ignore or avoid. On the other hand, there are good reasons why law teachers should avoid adopting polemical attitudes and approaches in the classroom.² Finding the right balance between these two perspectives is a delicate challenge for environmental law teachers.

An equally difficult, emerging challenge for environmental law teachers involves placing environmental law in the context of the rapidly expanding scientific evidence of impending ecological collapse, in particular because of climate change, but also through the loss of terrestrial biodiversity and the demise of ocean ecosystems. The overall picture of environmental destruction and potential ecological collapse can be a source of mental depression for students that their teachers may need to keep in mind. Lynda Collins and Brandon Stewart argue in Chapter 2 that there are compelling psychological reasons for providing a hopeful perspective to students concerning the role of environmental law in avoiding serious collapse. But an equally forceful argument has been made that younger students can emotionally handle the emerging evidence of impending collapse, and need to be provided with a frank and unsparing assessment of the future through their teachers.³ This debate deserves much greater attention in university education generally, not just in the context of environmental law scholarship.

Part II is very much the core of the book, in which the various formats and methodologies that have been employed in the teaching of environmental law are examined. As noted above, environmental law has engendered considerable innovation in teaching methodology as a result in part of its interdisciplinary and values-based character. In particular, it offers an opportunity for its teachers to utilise approaches to the delivery of their course that extend beyond

² The issue of poor-quality environmental scholarship associated with ‘the need to promote a certain ideology’ is discussed in E. Fisher, B. Lange, E. Scotford and C. Carlarne, ‘Maturity and Methodology: Starting a Debate about Environmental Law Scholarship’ (2009) 21:2 *Journal of Environmental Law* 213 at 223–4.

³ See R. Read and S. Alexander, *This Civilisation is Finished*, The Simplicity Institute, Melbourne, 2019, at 49–51 (Ch.12, ‘The role of a “teacher” in a dying civilisation’), available at https://www.researchgate.net/publication/334067990_This_civilisation_is_finished_Conversations_on_the_end_of_Empire_-_and_what_lies_beyond, accessed 28 April 2021.

the conventional lecture format and that promote student-centred learning outcomes.

In Chapter 5, Stuart Bell explores the role of open access textbooks and other open pedagogies in helping learners rethink their own learning, encouraging them to become producers rather than simply consumers of knowledge. In a similar vein, Ceri Warnock and others, in Chapter 8, describe their use of multidisciplinary approaches to teaching climate law to a mixed cohort of students, with corresponding innovative assessment design. They suggest this can enable a move beyond the ‘didactic methods of teaching prevalent in many law schools, where the aim is to deliver a large amount of substantive content through a traditional lecture format’.

In Chapter 7, Ben Boer examines the rationale for the use of small-group teaching methodologies, both generally and within an environmental law class, and then outlines how group-based activities can range from structured discussion and report back activities to self-directed, free form and brainstorming forms of discussion. He also describes other possible applications of the small-group format, including drafting assignments, role-plays, case studies and comparative law exercises.⁴ As we have noted above, the deployment of these teaching methodologies, either as alternatives or in addition to the conventional lecture format, may depend on a range of factors. These include class size, teaching facilities and even, in some countries, prescriptive requirements by universities or their law schools concerning the use of the lecture method.⁵ Nevertheless, as this contribution demonstrates, there is great potential for the use of innovative approaches to the teaching of environmental law as a means of fostering student-centred learning techniques.

Even where lecturing remains the principal format for the delivery of an environmental law course, there remains room for innovation. As Tracy Bach demonstrates in Chapter 6, it is possible to enhance the student learning experience in a large class by using active learning exercises, video, guest lectures and, where facilities permit, by breaking these classes into smaller groups on occasions. Again, this chapter reflects how the embrace of alternative, creative

⁴ The various small-group teaching methodologies identified in this chapter have been the subject of demonstration and discussion in the Training the Teachers (TTT) program developed and delivered by the IUCN Academy of Environmental Law (with support, *inter alia*, from the Asian Development Bank) in a range of Asian countries between 2012–18. See further, R.J. Fowler, ‘The Role of the IUCN Academy of Environmental Law in Promoting the Teaching of Environmental Law’ (2017) 8 *IUCNAEL e-Journal*, available at <https://www.iucnael.org/en/e-journal/previous-issues/86-journal/issue/640-issue-2017#>, accessed 28 April 2021.

⁵ *Ibid.*, at 39.

teaching methodologies by environmental law scholars provides examples that may have a wider application in the field of legal education.

Another context in which environmental law teaching has been at the forefront of innovation in legal education in a number of countries is the development of environmental law clinics. In Chapter 9, Evan Hamman and Jill Heaps provide a survey of the experience with such clinics in Australia and the United States that demonstrates both the popularity and learning benefits of this particular teaching methodology for students. Elsewhere in this book, various contributions identify other methodologies adopted in the course of teaching environmental law, including field trips (see Chapters 3, 4 and 8), and the reflective journal (see Chapter 2).

While mindful of our earlier caution against broad generalisations, the conclusion that we draw from these contributions to this book is that innovation and experimentation with teaching methodologies that constitute alternatives to the conventional lecture has been a distinctive feature of environmental law teaching across many countries. This, in turn, reflects an intellectual dynamism within the discipline of environmental law that we suggest is both impressive and commendable.

The next two parts of the book delve into other contexts for the teaching of environmental law besides an elective or core course on national environmental law within the basic legal curriculum. Part III considers the teaching of international environmental law as a separate subject. The two contributions each examine the use of innovative tools. Alexandre Lillo and Thomas Burelli discuss game-based learning in Chapter 10 and Chris McGrath explores the use of stories in bringing international environmental law to life for students in Chapter 11. There are valuable insights here particularly for those who have focused their scholarship and teaching on international rather than domestic environmental law.

In Part IV, there are four chapters devoted to the emergence of environmental law as a subject of study at the postgraduate level. As noted earlier, this trend has been another distinctive feature of the overall development of environmental law scholarship, particularly as it affords environmental law scholars the opportunity to engage at an advanced level in the classroom with their students. In Chapter 12, Heather McLeod-Kilmurray provides an expansive review of the emergence of specialist postgraduate coursework programmes in environmental law. In Chapter 13, Erika Techera examines how to teach a postgraduate environmental law course to a mixed cohort (that is, classes with both legal and other qualifications) and the use of intensive teaching modes (that is, courses delivered over a short time space). The remaining two chapters in this Part (Chapters 14 and 15), written by Willemien du Plessis and Anél du Plessis, provide a timely examination of the various issues and challenges associated with the supervision and conduct of doctoral research in

environmental law. These contributions also provide some broader messages and learnings for general legal scholarship at the doctoral level.

Finally, in Part V, there are three contributions that identify challenges related to the teaching of environmental law and, in the case of Chapter 17, some opportunities for new approaches centred around e-Learning. In Chapter 16, Steve Vaughan and a cohort of his students collectively present the results of a survey conducted by them of environmental law teaching in the United Kingdom that suggests the subject remains marginal in the legal curriculum, and is either static or in decline in terms of its popularity with students and its place in the curriculum. This situation may be particular to the UK, but it may also be a harbinger of developments elsewhere. Universities and law schools in the developed world appear to be facing financial constraints that may give rise to contractions in support for both teaching and research. The COVID-19 global pandemic, which has had an economic impact on universities in many countries, may have exacerbated these constraints. In this changing climate for universities, the established place of environmental law in the legal curriculum could become vulnerable if scholarship and teaching contracts to other areas considered more essential or foundational.

Chapter 18, by Chacrit Sitdhiwej and Rob Fowler, raises similar issues with respect to the teaching of environmental law in Thailand, where the subject struggles still to find a place in the law curriculum and where there is also a shortage of legal scholars with the necessary expertise to teach it. It is difficult to determine to what extent the situation described in Thailand is indicative of a problem on a much wider scale globally, particularly in developing countries, but there is evidence that it is at least representative of the situation in a considerable number of other Asian countries.⁶ There is a strong argument for devoting greater attention to the promotion of environmental law scholarship and teaching in countries where it presently lacks recognition or status within the law curriculum. The IUCN Academy of Environmental Law has accepted this challenge by developing and delivering a Training the Teachers (TTT) project in Asia, but this work needs to extend elsewhere also.⁷

In Chapter 17, Amanda Kennedy and Amy Cosby examine the place for e-Learning in environmental law. They contend that environmental law is suited to the online teaching medium for a variety of reasons, not least of which is its potential to lower energy usage and reduce the carbon footprint of students (where travel to campus and use of physical lecture spaces is minimised as a consequence). Online learning platforms can facilitate the sharing of rich multimedia content with students, which is particularly apposite in the

⁶ *Supra*, fn.4.

⁷ *Ibid.*

context of environmental law given the wealth of content available online from documentaries to interactive mapping tools that enable students to better visualise the sites and spaces of the cases they are learning about. E-Learning may also assist in enabling access to study for those who may otherwise be prevented from attending a physical campus; a benefit which has become considerably more relevant in a COVID-19-affected world that has seen the forced closure of university classrooms in many places, and a move to online teaching techniques to enable the continuation of classes. This raises questions, as Kennedy and Cosby note, around the conscious design of learning activities that are suitable for the digital medium, as well as access to the required technical resources by both teachers and students. This chapter provides a valuable and highly topical insight to how this technique can be effectively utilised in the delivery of an environmental law course.

Each of the chapters in this book help to paint a picture of environmental law teaching taking place around the world now. However, they also suggest possibilities for the future and raise important questions for continuing debate amongst the scholarly community. In an attempt to draw the threads together, the rest of this introductory chapter summarises some of the core issues prompted by the contributions to this book.

THE STATUS OF ENVIRONMENTAL LAW IN LEGAL EDUCATION: MARGINAL V MAINSTREAM ACTIVITY?

A contestable but critically important issue concerning environmental law is its perceived ‘marginal’ status in the legal curriculum. Marginality suggests that a subject sits at the fringes of the discipline of law, is inconsequential, and is seen as a luxury rather than an essential component of a good legal education. There are certain ramifications that flow from the perceived marginality of a subject, not least that its continuing place in the curriculum may be particularly vulnerable to differing ideologies and political undercurrents at state, institutional and even faculty level.

Although the perception of environmental law as having only a marginal disciplinary status may be more prevalent in certain legal cultures as opposed to others, this view has been extended to both its scholarship and its teaching. In an article published in 2009, Fisher et al advanced a vigorous argument concerning the perceived marginality of environmental law, as part of a wider exploration of the ‘maturity’ of environmental law scholarship.⁸ They suggested that environmental law scholars regard the subject as marginal to

⁸ *Supra*, fn.2.

mainstream legal scholarship and offer in support explanations that are partly specific to the British situation (a relatively low number of environmental law scholars; and a low output in generalist legal journals) and partly of a more general nature. In the latter regard, they point to the values-based nature of the subject and its connections to alternative politics and new social movements, and to its disconnection from mainstream legal scholarship, which they link to a considerable demand for environmental law teaching from non-law students.⁹ While this critique represents an internal, rather than an external assessment by other legal scholars or practitioners, this does not exclude the possibility that the perception may be more widely shared within the legal education system.

The marginality view has also found expression with respect to the teaching of environmental law. In 2018, Scotford and Vaughan observed that:

Environmental law dominantly being an option suggests that it is an ‘extra’ to the core of legal learning, a ‘nice to have’ for students if they care about the environment and can forgo other subjects often perceived as more relevant for their future careers.¹⁰

In a subsequent publication, Vaughan et al (2019) have argued that ‘environmental law is marginal in a number of ways’, including a decline in environmental law teaching and static student numbers revealed in their recent survey of British environmental scholars.¹¹ They also attribute low student interest in the subject to a consideration of their future employability prospects, given that practising lawyers in Britain apparently do not perceive the subject as important in practice.¹² These are important observations that may resonate with environmental law scholars in other countries and they deserve serious consideration. In particular, environmental law remains an outlier in certain countries, especially in some parts of the developing world, as evidenced by the study in this book of the teaching of environmental law in Thailand.

However, it is necessary also to bear in mind our earlier caution about broad generalisations. There are other, contrary indications that environmental law

⁹ Ibid., at 221–3.

¹⁰ E. Scotford and S. Vaughan, ‘Environmental Law and the Core of Legal Learning: Framing the Future of Environmental Lawyers’, OUPBlog, 15 August 2018, available at <https://blog.oup.com/2018/10/environmental-law-core-legal-learning/>, accessed 28 April 2021.

¹¹ S. Vaughan, et al., ‘Of Density and Decline: State of the Nation Reflections on the Teaching of Environmental Law in the UK’, (2019) Faculty of Laws University College London Law Research Paper No. 5/2019, available at SSRN: <https://ssrn.com/abstract=3395220>, accessed 28 April 2021 (a condensed version of this article appears in this book at Chapter 16).

¹² Ibid., at 17–18.

has become a part of mainstream legal scholarship, or is progressing steadily towards this status, in many other parts of the world.¹³ Particularly in North America and many parts of Europe, domestic and international environmental law classes, despite their elective status, have a well-established place in the basic legal curriculum and continue to attract relatively large enrolments. In law schools in the United States, there are numerous specialist environmental law clinics¹⁴ and over 80 specialised environmental law journals;¹⁵ in addition, there are various national rankings of law schools for their environmental law programs.¹⁶ In other countries as diverse as South Africa, Australia, Brazil and New Zealand, strong communities of environmental law scholars also are engaging enthusiastically in teaching and research in the field of environmental law. Besides being taught routinely as an elective in the core legal degree, many law schools around the Western world also have established an extensive array of postgraduate coursework Masters' programs in environmental law.¹⁷ The overall picture therefore is of a new and dynamic sub-discipline of law that is evolving by establishing a substantial presence in legal education across many parts of the world.

It is also undesirable to assume there is a direct nexus between the elective status of a subject and its marginality (think of the widespread recognition of family law, human rights law, intellectual property law, taxation law and labour law as legitimate areas of teaching and research within the global legal

¹³ In fairness to Vaughan et al, we acknowledge that their critique focuses on the UK and does not intend to present a broader picture with respect to environmental law teaching elsewhere.

¹⁴ For a description of the experience with environmental law clinics in the USA and Australia, see Chapter 9.

¹⁵ This figure is cited at fn.117 in M. Blumm, 'Environmental Law at 50: Cutting-Edge Journal Examining the Central Issues of our Time' (2020) 50 *Env. Law* 1.

¹⁶ See, e.g., *Top Law Schools – Environmental Law* (2019), available at <https://www.kaptest.com/study/lsat/best-10-law-schools-for-environmental-law/>, accessed 28 April 2021. There is also a thriving and highly active community of environmental law scholars that has its own listserv (ENVLAWPROFESSORS), administered by Professor John Bonine from the Law School, University of Oregon.

¹⁷ A 2020 global ranking of Masters in Environmental Law Courses lists ten courses from the USA, the UK, Australia, the Netherlands and Canada: see LLM Guide, *Top LLM Programs for Environmental Law 2020*, available at <https://llm-guide.com/lists/top-llm-programs-by-speciality/top-llm-programs-for-environmental-law>, accessed 28 April 2021. A separate guide for the USA by the same source lists 49 Masters programs in environmental law and related areas in that country alone: see LLM Guide, *LLM Programs in Environmental Law / Energy Law / Resources Law - United States*, available at <https://llm-guide.com/schools/usa/concentration/environmental-law-energy-law-resources-law>, accessed 28 April 2021. For a discussion of the development of postgraduate coursework programs in environmental law, see Chapter 12.

academy). In addition, while environmental law still may be an elective in many countries, it is moving gradually towards becoming a 'core' subject in the basic legal curriculum in some parts of the world. Interestingly, this is occurring most often in countries outside the Western world,¹⁸ including four of the most populous: India, China, Indonesia and the Philippines. There is no reliable information to assist in determining whether this is a trend confined to the Asian region or that extends elsewhere as well. However, insofar as it has manifested in Asian countries with developing or emerging economies, this may reflect that legal education has been undergoing a rapid expansion in these countries that has allowed greater flexibility in the design of legal curricula than is possible in much of the Western world.

We note also that environmental law scholars are convening together in various parts of the world with increasing regularity to share their scholarship and engage in discussions concerning approaches to the teaching of environmental law. The IUCN Academy of Environmental Law (IUCNAEL) has provided a particular impetus in this regard by convening an annual colloquium that on occasions has attracted several hundred participants, with both a teaching and a research workshop usually preceding the main event. This volume is the result of a project initiated by the Teaching and Capacity-Building Sub-Committee of IUCNAEL, of which all of the editors are members. Within particular countries and regions, meetings of environmental law scholars also are becoming commonplace, reinforcing the growing recognition of environmental law as a legitimate and dynamic new field of legal scholarship. Many of these activities have either emerged or expanded considerably since Fisher et al invited a debate about environmental law scholarship just over a decade ago.

Finally, we note the burgeoning body of publications in the field of environmental law. There is now a wide range of specialist environmental law journals to which scholars in this field regularly contribute articles. In addition, textbooks and specialist treatises on particular aspects of environmental law have found willing publishers across the world. These include the publisher of this volume, Edward Elgar Publishing, which has an entire section of its legal publications dedicated to environmental law, publishes the edited proceedings of the IUCNAEL Colloquia and has commissioned the first *Encyclopaedia of Environmental Law*. Arguably, environmental law ranks favourably alongside many other areas of law in producing a large and creative publication output,

¹⁸ A notable exception is Australia, where two Law Schools (at the University of Southern Cross (see <https://www.scu.edu.au/study-at-scu/courses/bachelor-of-laws-3007083/> accessed 28 April 2021) and the University of South Australia (see <https://study.unisa.edu.au/degrees/bachelor-of-laws-honours#section-degree> accessed 28 April 2021)) have designated environmental law as a core subject within their LL.B curriculum.

if we consider these additional avenues for publication alongside generalist legal journals.

Given all these considerations, and embracing our earlier self-caution against making broad or generalised assertions, a qualified conclusion is that environmental law has found a place in the mainstream of legal scholarship and education in many parts of the world. The qualifications are, first, that some significant exceptions exist in this regard, particularly in developing countries, and second, that there is also a perceivable risk that this mainstream status could decline in the near future, or is already declining, in some countries.

Finally, even if the status of environmental law within the law curriculum remains questionable in some places, we suggest that the conception of what represents the core elements of a legal education should not remain static and should reflect contemporary concerns and challenges for human society. From this perspective, environmental law deserves recognition worldwide today as a mainstream area of legal study, given the increasing severity of environmental problems on a global scale that are giving rise to the suggestion of a new epoch named the Anthropocene.¹⁹

DESIGNING AN ENVIRONMENTAL LAW COURSE (PURPOSE, SCOPE AND CONTENT)

For legal scholars engaged in the teaching of environmental law, whether they are doing so only recently or have been involved in this vocation for many years, there are some significant challenges that they must address in designing their course. We examine these next.

A fundamental task at the outset is to determine the **purpose** (often described as the aims and objectives) of an environmental law course. This involves an issue that has long been the subject of debate in legal education more generally: is the aim to provide a ‘scientific’, vocational education for the students that they may utilise later in the workforce or is it to provide a ‘liberal arts’ education that explores the subject matter from related social, political, economic, ethical and other perspectives?²⁰ This translates into a choice for environmental law teachers whether to present a ‘survey’ course that covers a relatively wide range of environmental laws or to undertake a deeper examination of one or a few specific aspects of environmental law (e.g., environmental impact assessment, pollution control, hazardous substances or

¹⁹ See C. Hamilton, C. Bonneuil and F. Gemenne, *The Anthropocene and the Global Environmental Crisis, Rethinking Modernity in a New Epoch*, Routledge, 2015.

²⁰ For a detailed history of this debate, see J. Krook, ‘A Brief History of Legal Education: A Battle between Law as a Science and Law as a Liberal Art’ (2017) 17:2 *Legal History* 30, particularly at 42–3.

nature conservation laws). The latter approach can involve the consideration of governance principles, regulatory theory, economics or other perspectives that extend beyond a conventional legal analysis.

The risk for teachers, in opting for a survey approach, is that their students will find themselves buried in a mass of legislative detail without gaining any real appreciation of how the multitudinous provisions operate in practice. This situation prompted the late Professor Joseph Sax to describe American environmental law 30 years ago as ‘... an encounter with statutes of numbing complexity and detail’.²¹ Given also the frequent amendment of most environmental laws in many countries, this assessment is equally pertinent today. On the other hand, the pursuit of relatively sophisticated, social science perspectives to examine the operation of particular aspects of environmental law may involve an excursion into unfamiliar and challenging intellectual territory for students within a basic legal programme and might be better suited to more advanced, postgraduate coursework studies.

A pragmatic middle ground to defining the purpose of an environmental law course might involve examining not only the key regulatory or other elements of whatever aspects of environmental law are selected by the teacher for coverage, but also exploring with students the implementation and effectiveness of these laws. These are two related, but distinct, aspects of the operation of environmental law that can be examined from a relatively non-theoretical perspective, by referring to relevant reports, independent assessments or other evaluations. With respect to implementation, the aim could be to examine the extent to which those responsible for the administration of the relevant legislation and those whose activities are directly regulated or otherwise influenced by it, are complying with their statutory obligations. It can extend also to considering the sanctions or remedies that are available to compel compliance (in particular, through proceedings in the courts or specialist environmental tribunals) and their use in practice. Effectiveness involves an examination of the type of environmental problem that particular environmental legislation seeks to address and whatever evidence exists as to whether the legislation is achieving its stated goals.

This pragmatic approach to defining the purpose of an environmental law course affords students the opportunity to examine the operation of particular laws in a wider political, economic and social context, with a view to considering deeper questions concerning efficiency and accountability. This can extend or supplant traditional methods of legal learning that often focus on the examination of statute and (at least in common law jurisdictions) case law. While

²¹ Joseph Sax, ‘Environmental Law in the Law Schools: What We Teach and How We Feel About It’ (1989) 19 *Environmental Law Report* 10251 at 10251.

this may prove to be uncomfortable territory for some students, for most it is a refreshing opportunity to stretch themselves beyond the confines of much of their other legal studies.

It might also be preferable for students to study environmental law towards the end of the legal curriculum, after they have completed core subjects such as constitutional, administrative, property, criminal and torts law, all of which can have some relevance and application to environmental law. Whether any, or all, of these subjects should be designated as prerequisites is a matter for those designing an environmental law course to consider carefully at the outset and may be determined by the particular course design and content that they adopt.²²

The **scope** of an environmental law course depends primarily on two factors: first, the purpose and objectives identified for the course (as just discussed), which may influence the extent to which it involves a survey of a wide range of environmental laws; and second, the identification of what laws fall within the ambit of this area of the law. No agreed definition of environmental law exists that can authoritatively determine its ambit, but we suggest there are some broad ‘streams’ that are readily identifiable and which should be considered when designing the content of an environmental law course. These include:

- Environmental planning laws, which can encompass traditional land-use planning law (though this is often taught separately as a stand-alone, elective subject) and environmental impact assessment law;
- Environmental protection laws covering pollution (air, water, noise and wastes) and various types of environmental risk regulation (concerning chemicals, site contamination and potentially hazardous technologies such as genetic engineering);
- Laws designed to conserve and protect particular aspects of the natural environment (e.g., biodiversity, terrestrial and marine protected areas, endangered species and wetlands) and various forms of ‘heritage’ (natural, built, cultural and indigenous), many of which provide for the identification, listing and protection of highly-valued components;
- More recently, the new stream of climate change law (which usually requires the study also of particular aspects of energy law), which also may

²² To go a step further, it is arguable that a considerable proportion of the commonly identified ‘core’ of the law curriculum is teachable from an environmental perspective. See, e.g., Scotford and Vaughan, *supra*, fn.10, where the following question is posed: ‘Might we want to restructure some parts of legal degrees to teach key legal concepts and reasoning more explicitly through the framework of environmental problems...?’

be taught in more detail as a separate, stand-alone subject, particularly at the postgraduate, coursework level.

Finally, there is a substantial stream of laws relating to natural resources management which some would argue constitutes a separate and distinct area of scholarship from environmental law. These laws cover the ownership, allocation and utilisation of natural resources such as land, soils, water, forests, minerals, oil and gas (including unconventional gas) and fisheries. However, it is possible to examine some aspects of these laws from an environmental perspective, in particular how and to what extent their traditional objective of promoting the orderly allocation of such resources has been modified by the inclusion of objectives and mechanisms designed to prevent over-allocation of these resources. It is possible also to examine how these laws provide for the management of the environmental and social impacts associated with the extraction or taking of particular resources and the relationship between these measures and the more general environmental planning and protection laws that fall within the first stream mentioned above. Within a 'survey' style of environmental law course, it is still possible to include a component that examines at least selected aspects of natural resources management law (e.g., water resources management law).

With these streams in mind, the environmental law teacher must decide upon the exact **content** of their course. In so doing, several other themes or perspectives of a more general nature also need to be considered, in particular:

- Whether, in presenting a course on national environmental law, to include some consideration of relevant **international or regional perspectives** (e.g., the nature of relevant environmental problems on these larger scales), the efforts through international and/or regional environmental laws to address these problems, and the extent to which relevant national laws are based upon international or regional treaty commitments;²³
- To what extent to explore, possibly at the outset of the course, the underlying **'foundations' of environmental law**, in particular the identification of an over-arching goal such as sustainable development²⁴ and general legal principles (e.g., precaution, inter-generational equity, polluter pays, pollution prevention etc.) that may have relevance across the various streams;²⁵

²³ These considerations may be particularly important when teaching environmental law in countries within the European Union, but could also apply elsewhere, for example within the ASEAN or South Pacific regions.

²⁴ See, e.g., D. French and L.J. Kotze (eds), *Sustainable Development Goals: Law, Theory and Implementation*, Edward Elgar Publishing, 2018.

²⁵ Australian Panel of Experts in Environmental Law (APEEL), Technical Paper 1, *The Foundations of Environmental Law: Goal, Objects, Principles and Norms* (2017),

- Whether to explore **‘normative’ aspects of environmental law**, in the form of general environmental rights (e.g., to a clean and healthy environment) arising from human rights²⁶ and constitutional laws²⁷ and general environmental duties (e.g., to prevent or minimise environmental harm); and
- Whether to include an examination of the **ethical and philosophical dimensions of environmental law**, including recent literature proposing its substantial re-design as ‘wild law’²⁸ or ‘ecological’ law²⁹ or through the recognition of rights for nature.³⁰

Finally, there is also the challenge of the **interdisciplinary nature of environmental law**, which involves questions for the teacher about how, and to what extent, to introduce content from other disciplines into an environmental law course. Techera describes the possibilities in this regard as follows:

Many other disciplines are also relevant, including the physical and social sciences, environmental studies, politics and international relations. It is clear that graduates of environmental law programmes, whether practising lawyers or not, will need to develop an understanding of the role of other disciplines in addressing environmental issues in order to contribute positively to this growing field.³¹

available at https://static1.squarespace.com/static/56401dfde4b090fd5510d622/t/58e5f852d1758eb801c117d8/1491466330447/APEEL_Foundations_for_environmental_law.pdf accessed 28 April 2021; see also N. de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2002.

²⁶ See, e.g., United Nations, Human Rights Council, *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, A/HRC/37/59, available at <https://undocs.org/en/A/HRC/37/59>, accessed 28 April 2021.

²⁷ See, e.g., J.R. May and E. Daly, *Global Environmental Constitutionalism*, Cambridge: Cambridge University Press, 2014.

²⁸ See C. Cullinan, *Wild Law, A Manifesto for Earth Justice*, 2nd ed., Green Books, 2017; also, P. Burdon, *Exploring Wild Law, the Philosophy of Earth Jurisprudence*, Wakefield Press, 2011.

²⁹ See K. Bosselman and P. Taylor, *Ecological Approaches to Environmental Law*, Edward Elgar Publishing, 2017; note also the activities of the Ecological Law and Governance Association (ELGA): see <https://www.elgaworld.org/>, accessed 28 April 2021.

³⁰ See R.F. Nash, *The Rights of Nature*, University of Wisconsin Press, 1990; and D.R. Boyd, *The Rights of Nature: A Legal Revolution That Could Save the World*, ECW Press, 2018. There are other, human-centred perspectives that also may be explored, in particular the concept of environmental justice which finds recognition in the principle of intra-generational equity, and the related concept of inter-generational equity.

³¹ E.J. Techera, (ed) *Environmental Law, Ethics and Governance*, ID Press, Oxford UK, 2010; UWA Faculty of Law Research Paper No. 2012-04. Available at <https://ssrn.com/abstract=2177408>, accessed 28 April 2021.

Within the broad ambit of the social sciences, both economics and governance have particular relevance. For example, the role of economic instruments as an alternative or supplement to legal regulation is a significant issue that may warrant attention in a range of contexts.³² In addition, environmental governance studies provide insights that can assist students to understand how environmental law operates in practice.³³ Thus, there are multiple disciplinary dimensions that can be addressed in an environmental law course, alongside the various streams and themes identified above.

Many environmental law scholars recognise and accept the interdisciplinary nature of the subject, but there is relatively little discussion concerning how best to approach this aspect in designing and delivering an environmental law course. The obvious limitation for teachers of environmental law is that they are unlikely to have expertise across all of the other relevant disciplines, and cannot expect their students to be capable of embracing these in substantial depth. However, it may still be possible to tackle the interdisciplinary dimensions of the subject in a way that opens the minds of students to different ways of thinking about how environmental law operates, or how it might be re-designed in the future.

To take one example, in considering various forms of risk regulation, it is possible to explore the differences in the legal and scientific conceptions of proof that may arise in such contexts and whether persons with the relevant scientific expertise should make regulatory decisions or whether community input and engagement also is appropriate. Likewise, in teaching climate change law, it is possible, even necessary, to examine the weight of scientific evidence concerning the causes and impacts of climate change, as a background to the study of various legal measures. In these ways, interdisciplinary considerations can be part of a wider exploration of the rationale for particular environmental laws and the examination of their effectiveness, which we have suggested should be a strong focus within an environmental law course.

³² See N. Gunningham and P.N. Grabowsky, *Smart Regulation: Designing Environmental Policy*, Clarendon Press, 1998; also N. Gunningham, 'Environmental Law, Regulation and Governance: Shifting Architectures' (2009) 21:2 *Journal of Environmental Law* 179. Economics also may provide a deeper understanding of principles of environmental law that have been adopted from it, such as the polluter pays principle, and of approaches such as command and control regulation that rely upon the idea of a 'rational economic person' responding in a particular way to maximise utility.

³³ See C. Holley, N. Gunningham and C. Shearing, *The New Environmental Governance*, Earthscan, 2012.

CHALLENGES IN TEACHING ENVIRONMENTAL LAW IN THE FUTURE

To conclude this introduction, we offer some thoughts on two major challenges in relation to the future direction of environmental law teaching that warrant further attention.

The first is the need to expand the number of legal scholars who are equipped to teach environmental law in countries, particularly in the less-developed world, where currently there is a shortage of such experience. In this regard, the further deployment of ‘training-the-teachers’ programmes, such as that developed by IUCNAEL and subsequently delivered across a range of Asian countries, should be a high priority. Alongside adding to the teaching ranks, such programmes can demonstrate and promote participatory and innovative teaching practices of the kind described in this book. In addition, there is also a need to address the lack of specialised teaching resources (textbooks, specialist journals) and of access to digital teaching materials and technologies in many countries.

The fundamental challenge therefore is to find the resources to help address these deficiencies, whether it is through internal funding by governments, international funding through aid agencies and development banks, or with the support of philanthropic foundations. The global community of environmental law scholars should where possible promote this agenda to potential funders, and organisations such as IUCNAEL should continue to lead efforts in this regard.

The second challenge relates to the impact of technological innovation on the teaching of environmental law. At the most basic level, as has just been noted, this involves providing expanded access to digital teaching technologies in the classroom, especially in many lesser-developed countries. However, this technology-related challenge goes much further. The COVID-19 global pandemic has resulted in the closure of face-to-face teaching in universities around the world and forced many students to rely largely on digital, distance-learning technologies and materials to continue their studies, where these are available.³⁴ Whether this proves to be a temporary measure, or becomes a longer-term trend in teaching delivery for the many universities that are identifying cost-cutting measures in the wake of the pandemic, remains to be seen.³⁵ Reliance upon digital technologies for distance learning, rather

³⁴ See International Association of Law Schools, *Transitioning to Online Legal Education: The Student Voice*, July 2020 (copy on file with the authors).

³⁵ For an argument that it may be unsafe for law teachers to resume classroom teaching while the coronavirus continues to circulate, see T. Duane, *Teaching Law in*

than the delivery of face-to-face teaching, may represent a far more common approach to the teaching of law, including environmental law, in the future.³⁶

Other consequences of recent technology innovation also are likely to require consideration in the near future. Specifically, with respect to environmental law, teachers may need to explore with their students the particular application of technologies such as remote sensing, modelling and data analytics in the operation of environmental law. More generally, legal education will need to come to terms with the emergence of artificial intelligence, algorithms, machine learning, big data and analytics in relation to the operation of the legal system and the practice of law in the future. These are challenges for legal education and environmental law in a rapidly changing world that demand greater attention in the near future.

CONCLUSION

At the beginning of this chapter, we offered three justifications for the publication of this book, to which we will now return with some concluding remarks.

First, we suggested that the emergence of environmental law over the past 50 years as a significant new area of legal scholarship justifies a closer examination of how it is taught. Fisher et al have argued that environmental law suffers from an intellectual ‘incoherence’ that often reduces courses on the subject to ‘superficial surveys’.³⁷ An alternative perspective, which may be supported by the contributions to this book, is that environmental law presents a rich intellectual ‘diversity’ that provides both challenges and rewards for those engaged in scholarship and teaching in this exciting field.

Second, we noted a range of challenges that are particular to the teaching of environmental law that deserve closer attention, including the identification of the purpose and content of an environmental law course. In addressing this challenge, teachers of the subject may need to acquire sufficient expertise across all of the potential legal streams and themes mentioned earlier to feel confident in making suitable choices with respect to their course content.³⁸ An

the Time of COVID-19, unpublished paper circulated by the author on the envlawprofs listserv, 7 July 2020.

³⁶ This may be just one part of a wider social trend that involves people working from home more often and avoiding gatherings in larger groups for social, entertainment, sporting or other activities.

³⁷ *Supra*, fn.2.

³⁸ The difficulty in doing so is exacerbated by the fact that many, if not most, scholars will be expected to be involved in teaching one or more core areas of the legal curriculum, with which they must therefore keep pace alongside their environmental law scholarship.

acceptable alternative, now adopted by many environmental law scholars, is to focus their scholarship on particular areas within the discipline and to reflect this in the way in which they design and deliver their own environmental law course.

Third, we highlighted the use of innovative and distinctive teaching methodologies by environmental law teachers. We have sought to present many of these methodologies through the contributions to this book. We hope it will provide ideas and inspiration to all who are involved in, or about to embark upon, teaching a course in environmental law and that its audience will extend to legal educators more generally.