1. The search for environmental justice

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INTRODUCTION

Environmental law in the 20th century emerged from a growing awareness of the increasing harms to the physical world, and thus to the interests of human beings, from the impacts of technology, industry and growing populations. The legal instruments used were principally regulatory, relying upon the powers exercised by states over corporations and citizens within their jurisdictions. Many developments have altered the nature of the challenges and thus the focus and methods of environmental law. This has generated many instruments and strategies, starting with the explosion of environmental regulation last century, and then the use of market instruments and industry and civil society initiatives.

Part of the process has been a realisation that accumulating environmental harms can prejudice ecosystems, and jeopardise the health and welfare of people. There has been a growing awareness that those directly dependent upon natural systems, particularly Indigenous peoples, are often those most threatened. There is an increasing recognition that nation-state governance systems are often insufficiently effective, particularly in recognition of and respect for the interests of the less powerful. As a result the ideal of environmental justice has become an important concern. Gradually justice concepts are becoming part of the political narrative of international and national environmental law.

Frequently in the early stages of development of social innovation there are competing paradigms.¹ The political banner 'environmental justice' denotes many different ideas, generally pursuing an ideal of improving fairness in how natural resources are used and shared, and how the costs

¹ Kuhn's 'preparadigmatic' initial stage of innovation revolutions. Kuhn (1996).

of doing so (including the costs of preserving these resources) are allocated. Characteristic of the different versions of environmental justice is a political belief in the necessity of protecting the vulnerable, whether that vulnerability is of nature itself in the face of industrial power, or of people who have a special dependency upon nature.

Different ‘voices’ – judicial, philosophical, jurisprudential and community oriented – speak of these issues, but focus upon different aspects and use different arguments. Some focus upon esoteric concerns of jurisprudence and philosophies of social justice and environmentalism; others are concerned with issues of national and international legal doctrine; others are occupied with the practical and conceptual challenges of implementation; and still others focus upon the capacity of the community and governments, policymakers and environmental law scholars to effectively address the fundamental challenges within the search for environmental justice. The chapters in this book support a view that the term ‘environmental justice’ is, in the famous categorisation of Professor Stone, ‘a category of concealed multiple reference’: the term embraces many different, often competing, meanings that co-exist in the same scholarly ‘space’. Resolution of the difference is a priority only when a specific situation is to be adjudicated or an applied policy decision to be made.² There are at least three basic approaches to environmental injustice: a humanistic one based upon recognition of specific human interests in the environment; a more radical advocacy of rights of the environment *per se*; and composites where the recognition of human rights implies protecting natural systems. Whilst such distinctions may appear esoteric, how these discourses are resolved has implications for laws and constitutions, court processes and judicial interpretation, community capacity and the operation of the complete environment governance system.

The broad and evolving concept of environmental justice was the theme for the 11th Annual Colloquium of the International Union for Conservation of Nature (IUCN) Academy of Environmental Law, hosted by the University of Waikato and the University of New England in Hamilton, New Zealand, from 24–28 June 2013. This book presents selected papers from the Colloquium, representing the diversity and richness of the environment and justice scholarship and practice.

We intend that this book advance the shared ideals, without creating a

² A category of concealed multiple reference exists when a legal term can simultaneously denote or connote different meanings for different uses. In environmental law, terms like ‘sustainability’, ‘precaution’ or ‘environmental justice’ are illustrative. See Stone (1964) 246–8.

misleading sense that the pursuit of environmental justice draws upon a unified field of knowledge, or even unified values about the environment or human interests. The search for environmental justice is characterised by significant differences in what the searchers are aiming to discover through the quest. These differences are partly due to different perspectives from the developed and the developing world, and between authors with different world views or from different jurisdictional backgrounds. This will result in them following different pathways that sometimes will cross, but often will not. The extent to which this heterogeneity of goals and strategies is counter-productive is something for the readers of this book to judge.

The book is structured under four themes: framing the search for environmental justice, rights-based approaches, assessing current approaches to environmental governance, and Indigenous issues and approaches to environmental justice. However, many chapters span different themes.

FRAMING THE SEARCH FOR ENVIRONMENTAL JUSTICE

In the first Part perspectives on the fundamental nature of environmental justice are explored. The volume begins with a dissection of the legal elements required for environmental justice in Justice Preston's chapter 'The effectiveness of the law in providing access to environmental justice'. This chapter proposes that only by achieving distributional justice, procedural justice and justice as recognition together can true environmental justice be achieved. This structure helps to frame many of the chapters that follow. He highlights how existing statutory arrangements privilege consumption and consumption interests over non-human nature and future generations. This chapter links concepts of justice developed through administrative and environmental law, to concepts of 'the rights of nature', and 'rights to nature' that are core concepts of environmental justice.

Many readers will be familiar with distributive justice, which is concerned with fair sharing of environmental benefits and burdens.³ Justice Preston discusses three fundamental constituents of environmental distributive justice: membership of the 'community of justice', the nature of the benefits and burdens to be distributed and the principles and criteria for distribution. He highlights that both environmental benefits and burdens are subject to distribution through law, and points to the

³ Adopting the Rawlsian concept of justice as fairness. See Rawls (2001).

law's failure to include nature and future generations within the relevant community to be considered.

Procedural justice is concerned with how decisions are made and by whom, and who has power or influence over such decisions. The need for procedural fairness and public participation is increasingly reflected in international instruments; however, he highlights that few jurisdictions go beyond minimum standards. Justice Preston explains that procedural reforms, alongside recognition of broader interests, are essential to distributive justice in practice.

Justice Preston discusses the social and political 'non-recognition' and 'mis-recognition' of interest groups that intersects with legal concerns. Both recognition failures involve ignoring or discounting groups whose interests are non-consumptive. Issues of non-recognition, mal-recognition and rights, when considered together, suggest a link between human rights and environmental sustainability, but he points out that recognition of the rights of current humans can conflict with the interests of the environment itself. This raises a challenging concern of potential conflicts between 'rights of nature' and 'rights to nature', particularly the interests of less privileged and indigenous peoples.

Bosselmann's chapter, 'The rule of law in the Anthropocene', draws from ecology, history and philosophy to argue for radically different fundamental principles of law from those that currently prevail, enabling humanity to respond to the Anthropocene epoch. This term highlights that we have entered a period where the natural world is fundamentally shaped by humans, rather than by natural or geological forces.⁴ The chapter points to the necessity of a strong 'rule of law' for sustainability (specifically prioritising the integrity of ecosystems). Bosselmann argues that this requires acceptance within the law of collective self-restraint as essential to human survival. His approach integrates competing principles that are woven into the other chapters of this book. Some authors consider principles of environmental justice based upon human 'rights to nature' (framing environmental justice as a form of social justice), and others, such as Justice Preston, propose the recognition of the 'rights of nature' (investing nature with legal personality). Bosselmann prioritises human values but makes the protection of nature a central principle in protecting those values. He suggests that 'ecological sustainability' is a reason-based Kantian 'Grundnorm' which must qualify any legal norm, including the rule of law.

Framing the discourse of environmental justice is the likelihood that

⁴ Coined by Crutzen and Stoermer (2000) 17–18; Crutzen (2002) 23.

environmental justice issues become relevant when adjudicating competing claims to use or govern nature. Two fundamental questions emerge from the dialectic: what is the status of the interests of nature relative to the interests of humans; and within the human community what is the relative status of different categories of humans? In relation to this second question, it is important to recognise that there is also competition between the interests of industrial humans, 'traditional' users of primary resources such as farmers and fishers, between current and future generations and between Indigenous persons with their special claims and relationships, and other human members of the community.

Godden and O'Connell's chapter 'Biodiversity justice in a climate change world: offsetting the future', links the doctrinal and philosophical frameworks of the first two chapters to one instrumental approach, the use of environmental offsets. This chapter outlines the philosophical basis of offsetting, and its practical operation with native vegetation offsets in Victoria, Australia. The authors analyse offsets and climate change adaptation, exploring how offsetting might facilitate development without stemming biodiversity loss. There is limited evidence-based assessment of these tools, and a number of distributive justice issues are implicit in the approach. The authors suggest that schemes that allow current losses to be offset by future restoration raise issues of intergenerational equity. The argument reinforces the non-recognition and distributional justice concerns discussed in the two preceding chapters.

The chapter highlights the scientific and value judgement complexities, the risks of which seem not to be reflected in current processes. The authors argue that management of trade-offs over the life of the offset is insufficiently considered. The assumption of fungibility that underpins market mechanisms ignores differences in human values, and, within a 'rights of nature' conceptualisation of environmental justice, that species themselves can have different imputed values. Assumptions of equivalence between ecosystems thus need to be reconsidered, taking into account diverse values and future conditions, and the unpredictability of responses to climate change.

All these issues lead the authors to suggest that offsetting instruments result in an inter-temporal injustice. Whereas Preston highlights spatial distribution issues, Godden and O'Connell highlight inter-temporal distribution as the pivotal concern. They suggest that insufficient incorporation of climate change adaptation requirements further privileges current users over future generations and nature.

RIGHTS-BASED CONCEPTUALISATIONS

Environmental justice exists at the intersection between environmental law and the pursuit of social justice. Central to the pursuit of social justice is the development and implementation of legal rights, particularly of the vulnerable to be protected and to share in the opportunities of society. Overall, the chapters by Glazebrook, France-Hudson and Colón-Ríos bring together the various themes articulated by rights-based approaches to environmental law: human rights, Indigenous rights, and property rights.⁵

Justice Glazebrook argues for a specific human right to the environment in the chapter ‘Human rights and the environment’. Whilst some rights related to the environment exist in some constitutions, a general human right to a quality environment has not been widely adopted. If there is a coincidence between a pre-existing human right and the environment, courts have been more likely to protect environmental qualities, but in practice such opportunities are limited. Justice Glazebrook suggests that the failure to widely adopt rights to a quality environment is because procedural rights are politically more acceptable. She suggests that participation rights, particularly based on customary international law, may be a more promising avenue for reform. She argues that rights to participate and substantive rights must be tightly linked for an effective approach. The arguments in favour of an explicit human right to a quality environment include: giving greater prominence to the environment; directly addressing the needs of people who are vulnerable to environmental degradation; and explicitly requiring consideration of trade-offs between human and environmental considerations in public decision making. In part the argument for a human right to the environment is found in considerations of environmental human health, and Indigenous people’s rights and interests. She discusses the benefits of such a human right for environmentally displaced persons, with these issues being discussed in later chapters.

Justice Glazebrook considers the counter arguments, to help frame a viable human right to a quality environment. She highlights that the right should reflect a notion of guardianship for future generations, to counter the argument that present frameworks emphasise the present generation with little intergenerational recognition. Decoupling a right to the environment from sustainable development will ensure that the balance

⁵ See also: Shelton (2009) 91; Whata (2013); and Sian Elias ‘Righting Environmental Justice’ 12th Salmon Lecture, 25 July 2014.

between protection and development will be contested. The design she proposes suggests a vision of the right close to Bosselmann's formulation, where a human right to the environment incorporates the environment as having an indirect 'quasi-right'. This approach is founded on the Maori concept of 'kaitiakitanga' or guardianship incorporated into New Zealand environmental law as a principle for policy and plan preparation, and resource allocation and use decisions.⁶

In their discussion of the use of market instruments (specifically offsets) Preston, Godden and O'Connell reflect scepticism about market instruments, notwithstanding their support in economic theory, their attractiveness to policy-makers and evidence of their effectiveness in some situations.⁷ France-Hudson considers a particular version of emissions trading, 'no private property rights in the atmosphere', and arrives at a positive view of that scheme. He argues that the New Zealand Emissions Trading Scheme (NZETS), whilst relying upon tradeable entitlements, creates neither a private property right nor a right to pollute. Emission remains *prima facie* unlawful. It attracts substantial economic or possibly criminal penalties, unless the emitter surrenders a (tradeable) emissions unit equivalent to that pollution and that this avoids negative effects of offsetting through tradeable entitlements. Reading this chapter alongside the earlier critiques of environmental offsets suggests that it may be naïve to arrive at broad conclusions about the social justice consequences of market instruments as a broad category. Technical details and implementation arrangements within the social and economic context of particular jurisdictions will largely determine effectiveness in environmental terms and fairness in social terms.

Colón-Ríos provides insights into the practical operation of a substantive right to nature in 'On the theory and practice of the rights of nature'. This links abstract consideration about possible rights of nature to the implementation of such rights frameworks. The chapter points out that more than 100 national constitutions have versions of human rights to the environment. Ecuador was the first country to formally embed rights to nature itself in its 2008 Constitution. This framework provides legal mechanisms for those rights to be enforced. Nature is given equal legal status to humans. The regime was tested in the case of the Vilcambamba River. Whilst widening the road a government agency deposited rocks, sand, gravel, and trees into the river. Legal action was taken to require

⁶ See: Resource Management Act 1991 (New Zealand), s 7(a).

⁷ This evidence is far from definitive. Many market-based interventions, like many regulatory interventions, have not been effective; e.g. Shortle (2012).

remediation, on the basis of the interest of the river. The action exposed many legal complexities. Ultimately the court found on behalf of nature (the river) and required remediation and a public apology. The remedy has only been partly implemented, suggesting practical problems associated with a legal right. This chapter takes a perspective on the extension of rights to non-human creatures different to both Bosselmann and Preston. There is a complex issue of ethnocentrism versus nature-centrism or eco-centrism involved in this discussion. The Vilcambamba case highlights that most cases concerning the rights of nature involve the balancing of the rights of nature and the rights of humans, and determining within these categories which particular human or non-human interests will be recognised and how. Referring to earlier chapters this suggests that resolution of apparently esoteric arguments will be ultimately important in determining real-world environmental justice outcomes. A critical insight from Colón-Ríos in relation to this issue is the need for clearly articulated (procedural, recognitional) rules about standing to give effect to rights for nature.

Ecuador highlights the complicated balancing and trade-offs likely to arise if rights of nature are legally incorporated, as suggested by a number of authors. As the class of rights holders expands, and the rights they hold become more diverse, there is a practical problem of effectiveness and efficiency for the legal system. This problem is likely to become more pronounced. A question this raises is whether this may ultimately undermine public confidence in the legal system, or at least in this aspect of environmental justice. Could our pursuit of abstract social justice goals result in an intellectually elegant but dysfunctional system? Clearly, in the search for environmental justice it is essential to marry esoteric and pragmatic considerations. Even successfully advancing the political case for environmental rights will be insufficient to ensuring genuine beneficial impacts are achieved if implementation gives rise to high transaction costs, confusion, and erratic implementation. This is a significant, and probably under-appreciated, challenge to the academic community.

IMPLEMENTATION CHALLENGES OF ENVIRONMENTAL JUSTICE

The third theme explores how environmental governance is (or is not) embracing environmental justice. Chapters under this theme consider policy innovation responses to (often contentious) environmental issues including the institutional structures to give effect to legal principles and philosophical values. Mirroring the first theme, the chapters high-

light implementation difficulties, but also opportunities, in attempting to pursue any version of environmental justice, and the inevitability of political dynamics in the pursuit of environmental justice.

The first two chapters consider a challenge shared by two jurisdictions within the same region, highlighting common governance challenges in the pursuit of environment of justice in Southeast Asia. In 'REDD+ implementation in Thailand: legal and institutional challenges', Phromlath and Martin diagnose the reforms needed in Thailand, whilst Santosa, Khatarina and Suwana describe the reform strategy being undertaken in Indonesia in their chapter, 'Indonesia REDD+: beyond carbon, more than just forest'. REDD+ is an international carbon market initiative, seeking biodiversity and social justice outcomes whilst promoting carbon sequestration by incorporating protection for biodiversity and the interests of forest-dependent communities into the supply conditions of internationally traded carbon units. The role of national governments is to ensure that institutional safeguards have integrity and that the social and environmental justice arrangements are reliably implemented.

Both chapters suggest that whilst REDD+ is a starting point for reducing emissions and strengthening environmental justice, it will not achieve these goals without major institutional reform. Risks in both jurisdictions include insufficient incentives; corruption, mistrust and political tensions; limited citizen participation and ownership; unclear or inappropriate land rights; institutional incapacity, weak agency/organisational coordination and program coherence. The authors demonstrate that in practice achieving environmental justice requires sophisticated property rights that align private and public interests, a high quality public service, effective controls against corruption, empowerment of the less economically or politically powerful and an effective system of checks and balances with independent oversight. These investigations were unrelated, in separate jurisdictions, so the commonalities are startling. Both highlight the depth of the challenge, the need for reform to many laws and procedures (which may not at first sight seem to be relevant), and the significant on-ground effort and investment to convert aspirations and legal instruments into outcomes.

In the next chapter, 'Consensus federalism and freshwater regulation', Keene discusses an innovation in public participation, which aims to place negotiated decision-making authority in the hands of the affected community. The New Zealand approach to 'consensus federalism' has been applied in the management of water resources. It prioritises expertise from the affected region and consensus decision-making by the affected communities. The key feature is that the affected stakeholders are negotiating directly with one another, aiming to reach agreements that will be endorsed and thence binding. The author notes the potential for this

approach to increase Indigenous involvement in decision-making. The approach is compared to cooperative federalism in the USA. The comparative evaluation of the two approaches suggests that the New Zealand approach provides for more local consensus than the standards-based approach in the USA. The author argues that this will make the New Zealand regulatory system more effective and more robust. The chapter highlights the importance of procedural reforms and effective community participation in the pursuit of environmental justice. This reflects the arguments by Preston, and the observations by Phromlah and Martin and by Santosa, *et al.* that mechanisms of recognition and participation are fundamentally important.

The two chapters by Rose and Rive, consider the impact of climate change and other environmental pressures in the South Pacific. They identify how actions by developed industrial nations generate fundamental environmental and social impacts upon people whose lives are closely dependent upon natural resources. These challenges highlight the 'big picture' of environmental risks and the very limited response of Western industrialised nations to the existential threats to many Pacific island communities.

Rose and Rive highlight the pervasive nature of doctrinal and procedural failings which translate into continuing and worsening environmental injustice outcomes. It is widely known that human-induced climate change will impact low-lying islands, and that many are in the South Pacific. Because the adverse effects affect the viability of Pacific Island communities, the justice problem is about either the interests of the people or of the environment – both are threatened. The Pacific Islanders' relationship with their islands and waters are both functional and cultural, and these relationships stretch back for millennia. Threats to the environmental underpinnings of island life therefore involve an attack upon cultural traditions. Pacific island communities have striven to be heard on these matters, and to invest substantial effort in this.

Rose's chapter 'International environmental governance in the Pacific island region' discusses the importance of PICs (Pacific Island Countries) and small island states in global governance, given their climate vulnerability. He explores their participation in environmental governance initiatives at a regional and an international (MEA) level, and how fledgling regional arrangements have been 'swamped' by multilateral agreements. This highlights the lack of an effective rights approach and the failure to convert the rhetoric of climate justice and Indigenous empowerment into meaningful outcomes for the people concerned. In common with the REDD+ chapters, Rose's observations suggest that even well-intentioned initiatives can entrench inequities and erode the capacity of Indigenous

and vulnerable communities. He implies that pursuing 'soft law' and negotiated MEAs, with their complex negotiations and uncertain paths to implementation, may in practice be detrimental to pragmatic local action.

The critical focus upon the role of wealthier industrialised states, including South Pacific regional powers like Australia and New Zealand is reflected in Rive's chapter 'Safe harbours, closed borders? New Zealand legal and policy responses to climate displacement in the South Pacific'. This chapter highlights the need for environmental justice frameworks to respond to the effects of climate change on low-lying island communities. Whilst relocation may not be the preferred option for inhabitants of threatened Pacific island nations, it may be a necessity as some countries become effectively uninhabitable, or where poverty becomes far worse. The chapter details the issue of climate change refugees in the Pacific, and the lack of a principled response to this issue from New Zealand. It traces the history of regional and broader agreements, and cases involving climate refugees. The issue has been acknowledged as significant but there is as yet no judicial or political determination that would give security to potential refugees. The message of the chapter is that despite rhetorical support for its Pacific neighbours, the New Zealand government has not adequately engaged with the implications of potentially significant flows of climate change-related migration. The chapter speaks of issues of climate justice, adaptation and, specifically, climate-displaced persons.

Telesetsky advocates for greater attention to carbon reduction schemes at the national level in 'Overcoming climate inertia with unilateral action on black carbon'. The author suggests that multilateral attempts to achieve global action on climate policy have succumbed to inertia, with few substantive gains from negotiations to date. She proposes that nations focus their attention onto national policies to combat 'short-lived climate forcers', such as black carbon to achieve what is 'politically possible' in the short term. China and India black carbon emissions are mainly the result of energy and brick production. In both these countries emissions from transport are also significant (as is the case in many countries). Domestic stoves, particularly in industrialising countries, produce a significant part of the world's black carbon. The author details the control approaches in both of these countries, and highlights the need to accelerate these plans. Implementation of effective control requires many actions including capital investment, regulation, potential changes to fuel mixes and other interventions.

The issue of national versus international approaches is picked up by Telesetsky who suggests that the pursuit of an international regime, even if successful, may impede black carbon emission control rather than advance it. She outlines international initiatives and points out that some

states have taken tentative steps towards controlling black carbon emissions. She suggests that multinational initiatives lack urgency, and may be being ‘swamped’ by heavily politicised debates about climate change. Telesetsky stresses the need for state-based action, but highlights that civil action is an important component of environmental governance. This is particularly true when the harmful actions result in human health or welfare consequences, when both public and private law remedies may be available.

The relationship between national and international law, and the search for environmental justice, is not only a matter of substantive law. As highlighted by Preston in the first chapter of this book, procedural matters are the ‘third leg’ of the legal tripod of effective environmental justice. The following chapter reflects this argument as, Chaulk asks ‘Is there relief for transnational harm?’ caused by multinational corporations in jurisdictions where legal systems are unlikely to provide effective redress. This chapter explores how decisions in the USA have limited the capacity of foreigners to sue US corporations. He considers the Alien Tort Statute and the doctrine of *forum non conveniens* since the *Kiobel* case. He discusses the Union Carbide Bhopal catastrophe in India, and the violent suppression of local opposition in Nigeria to the effects of petroleum extraction (Royal Dutch Shell). Where the opportunity for effective redress in the home jurisdiction is limited (viz. by undue influence, or ineffective governance), the potential to take action in US courts is important to social justice. The author explores the decisions which have limited the potential for foreign tort actions in the USA jurisdiction. These cases generally involve actions against corporations, and the courts have been explicit in limiting such litigation.

This chapter highlights justice-as-recognition issues, at two levels: within the original jurisdiction, and limited or non-recognition in the foreign (US) courts. Distributional justice concerns are also raised. First is the *inter partes* distribution within the original jurisdiction, resulting in an arguably unjust distribution of the costs to the affected people, to the benefit of the harm-doer. Second is the inequitable distribution of costs and benefits between industrialised and the less-developed states. Third is the allocation of disbenefits and profit between industry as a sector, the agricultural sector, and private citizens. Finally, in some instances there is also an issue of distributional injustice being wrought upon Indigenous peoples as a class with distinct interests.

The author points out that there may be situations where corporate governance fails, and it is in the interests of justice that the corporation be held accountable. Given that the precedents discussed limit this potential, the author considers other options. He points out that whilst the prior cases

have limited action against corporations, this does not prevent actions against executives who may have direct involvement. He suggests that this approach may circumvent the restriction imposed through the *Kiobel* case. He points to instances where action against executives has been a catalyst for corporations to settle international legal actions, though without an admission of liability. The combination of legal tactics and protection of the social licence or reputation of the corporation has proven to be a mechanism to redress injustice. This chapter once again highlights that in the pursuit of environmental justice there is a close, perhaps inextricable, link between law and politics.

In the final chapter in this section, 'The Australian biotechnology regulatory framework: issues concerning adventitious presence (AP), co-existence, liability and coherence', Karky and Perry take the discussion of environmental justice in a slightly different direction. They focus upon the environmental justice issues triggered by scientific/industrial innovation, particularly in agriculture. In other chapters we have considered the power imbalances between developed countries and industries, and developing countries and their communities. This chapter draws our attention to the trade-offs between food security and risks of genetic pollution; between 'scientism' and 'communitarianism' in the value-laden but technologically complex issues of biotechnology regulation. It questions how well the distribution of the risks of scientific error or mismanagement is managed through the law.

Biotechnology, as the source of new crops, improved productivity and reduced crop losses, has a critical role to play in food security. Arguments 'for' or 'against' are freighted with values and scientific complexity. Perceptions of the risks differ depending upon the interests of those involved (genetic scientists, environmental scientists, industrial agriculture, organic agriculture and so forth), and the debates are heavily politicised. In jurisdictions like Australia, USA and Brazil policy makers have accepted science as the touchstone for the permitting of these crops. Notably in Europe, a communitarian approach to risk and values has led to stronger restrictions. The facts reported show a trend towards increasing international acceptance of the presence of genetically modified material ('low-level presence' or LLP). The authors highlight the technical details in this chapter, providing details of measurement and thresholds for LLP.

Even within a 'science-based' risk regulatory framework such as in Australia, the opportunity for genes to spread and lead to adventitious presence (AP) is present. Thus legal arrangements embed a risk distribution that has justice implications. This risk impacts upon the coexistence and trade of transgenic, organic and conventional crops, resulting in an

allocation of risk and economic loss or gain between growers of transgenic crops, and other farmers for whom the unintended presence of genetically modified organisms will be disadvantageous. Legislation or case law has not responded to these risks with specific liability or other arrangements. The authors suggest that measures to minimise AP levels and specific liability arrangements for damage caused by drifted genes are needed in the interests of environmental justice.

The chapter highlights a little-considered dimension of environmental justice, the implications of 'scientism'⁸ in determining distribution and process arrangements under the law. The concept of science-based decision-making, and its incorporation within legal arrangements for issues like the management of genetically modified organisms, is seen as a positive development. However, the approach carries with it an intrinsic prioritisation of the values of an elite group, and the discounting of others. In fields such as community engagement and participative democracy, overcoming the power imbalances that disadvantage non-scientists has been seen as a matter of concern. This points to a problem of non-recognition or mis-recognition of the interests of those antagonistic to this type of transformation of nature, or of nature as part of the community of justice. This issue raises practical and philosophical questions about the status of modified, compared to non-modified, nature. It highlights the many challenges of non-recognition within the legal system. These are taken up in the final three chapters concerning environmental justice and Indigenous peoples.

RECOGNITION OF INDIGENOUS PEOPLES' INTERESTS

The final theme is Indigenous environmental justice. The questions raised in this section bring into sharp focus the ambiguities and complexities of environmental justice, from the perspective of vulnerability, or from the perspective of rights. The chapters all suggest that the frontier of environmental justice is the issue of Indigenous peoples' interests. Responding effectively to these challenges is a fundamental concern both for environmental and social justice advocates.

In the first chapter under this theme, 'Customary law systems for water governance in Kenya', Gachenga highlights non-recognition of customary

⁸ Reliance upon scientific knowledge with its implicit values, generally to the exclusion of other perspectives.

law in water governance in Kenya. This sets the scene for consideration of what might be required to effectively recognise and respect Indigenous peoples' systems of norms and rules within the dominant legal system of the nation state. A customary water governance system that predates colonial rule operates on the Marakwet Escarpment. The Kenyan national water governance framework is based on the Water Act 2002, which does not explicitly recognise customary rights. However, Kenya's Constitution recognises the existence of customary law, which is given limited application through the Judicature Act. The content and application of customary law is a mechanism for establishing the existence of private rights, to the extent that these are not inconsistent with the formal law.

Under the Marakwet cultural traditions water is sacred. Water rights are associated with land ownership, which is undocumented. The community considers its ability to govern water under its own law as a fundamental matter, and in practice does not recognise state law. There appears to have been no specific conflict of state and traditional laws and in the absence of competition between the Water Act and the customary law, there is no practical reason for state actors or Indigenous people to be aware of their separate governance systems. Indeed, provided that the arrangements are not inconsistent, no functional difficulty may ever arise. Thus the issue of non-recognition might be considered as moot. However, the author mirrors Craig's view (expressed in the following chapter) that non-recognition is intrinsically a violation of a right, hearkening back to the framework for environmental justice outlined by Preston and the rights based approach articulated by Glazebrook. The chapter also contrasts the 'top-down' structure of the Water Act and related administrative structures with the 'bottom-up' and consultative mechanisms of traditional law. This is mirrored in the final chapter by Aseron, Greymorning and Williams.

Gachenga argues it may be possible to use the human right to water⁹ or the rights of Indigenous peoples¹⁰ as a basis for legal recognition of customary water law in Kenya. However, she indicates that human rights to water and sanitation probably have limited application as the issue is recognition of customary autonomy in governing water for irrigation, not water for subsistence. The author argues that making the link between customary governance and human rights is more likely to be effective than

⁹ Resolution A/RES/64/292. United Nations General Assembly, July 2010 General Comment No. 15. The right to water. UN Committee on Economic, Social and Cultural Rights, November 2002.

¹⁰ Declaration on the Rights of Indigenous Peoples, United Nations General Assembly, New York City, 13 September 2007.

pursuing a customary right to natural resources, because human rights issues are better established in Kenyan jurisprudence, through the Bill of Rights.

Craig's chapter, 'Legal strategies to expand indigenous governance in climate change adaptation', advocates for the incorporation into climate change management of a greater respect for Indigenous peoples' rights. Existing approaches to climate change unthinkingly replicate State-centric governance models that fail to respect Indigenous peoples' rights. New approaches need to move beyond viewing Indigenous peoples merely as stakeholders or participants, and to recognise their distinct rights and interests. Whilst this chapter highlights that indigenous people will be disproportionately represented among populations harmed by climate change, Craig makes a case that focusing only upon vulnerability interests fails to fully recognise the claims and contributions of Indigenous peoples. Indigenous climate change interests arise at three levels – as members of the population of citizens who will suffer economic and welfare impacts; as vulnerable Indigenous people who will suffer additional impacts such as loss of cultural resources and collectivity, who need protection and deserve compensation; and as Indigenous peoples with distinct rights that need to be recognised in governance. This last aspect is virtually absent from dominant concepts of governance and climate change response, and is an argument that is developed further by Aseron, Greymorning and Williams in the following chapter.

The chapter considers that a principled approach requires a move from impacts-based thinking to a rights-based conceptualisation. Part of this is to reconsider sovereignty and the state, and the relationship of Indigenous peoples to the state. The focus would be upon the independent rights of Indigenous peoples to negotiate their relationship with the formal state, participating with a distinct status and rights. Among the basis for rights-based involvement in climate change policy and management are claims to a right to cultural survival, given the impact of climate change. Whilst effective legal recognition of special rights status must come through state sovereignty, she argues that sovereignty relies on other sources of authority. Craig suggests that the failure to recognise existing rights or emerging rights may prejudice currently negotiated arrangements, and become a future source of conflict over justice. She argues that the nature of the state and the relationship of Indigenous people to the state are changing. The meaning of what constitutes law (human rights particularly) is undergoing an evolution. It is becoming more complex particularly with notions of 'soft law' and 'traditional law' being given greater attention through judicial interpretation and new legal venues.

These developments raise the question: if the fundamental structures of

the justice system are evolving, then in what ways must environmental law scholarship, policy-making and practice also evolve? The final chapter in this book challenges many assumptions about environmental law scholarship, and suggests that embedded in legal traditions are problems of non-recognition, adverse distribution and inappropriate process. Indigenous peoples offer a wealth of knowledge for dealing with environmental problems, but we do not use culturally appropriate methods to harness this knowledge. Aseron, Greymorning and Williams offer timely suggestions for how to pursue collaboration and avoid marginalisation and commodification of Indigenous knowledge in their chapter, 'Innovative collaboration, inclusive practices, governance and cultural capital'.

This concluding chapter argues that economically and politically dominant cultures systematically oblige Indigenous people to reframe their interactions subservient to that dominance, and that this is more powerful and pervasive than many who are not Indigenous people can ever understand. Institutionalised research approaches largely exclude or at least constrain the perspectives of Indigenous people. This is so even when researchers want to 'empower' their Indigenous colleagues. Two specific illustrations are given: the choice to use modes of communication which do not take into account the significance of ritual for communicating and learning by Indigenous peoples; and the assumed acceptance of the coloniser's language as the only appropriate means of communication.

In part to illustrate the differences the authors use a combination of representative diagrams and Indigenous storytelling to highlight the significance of differences in culture, power relationships, ways of understanding the world and governance mechanisms. The maintenance of dominance and difference through generally used approaches are political choices enforced by scientific cultures. In themselves they limit the capacity of Indigenous people to participate and the capacity of the researchers to come to a true understanding of the knowledge that is available. The authors suggest that even the methods and aspirations of movements like environmental justice and earth jurisprudence may themselves be oppressive of people who have a fundamentally different cultural perspective.

In common with a number of the other chapters, this chapter suggests that at the heart of problems of environmental justice lie power relationships, and the fundamental conflict between dominating and less powerful or oppressed interests. A fundamental consideration is that for one group in society to be given more power requires that another group surrender some power. Decisions about who will be recognised, what processes will be used to allow participation within the legal system, and ultimately how these benefits will be distributed are intrinsically about the exercise of power. This chapter brings that potent fact clearly to our attention.

It suggests that even the desire to act with goodwill may be far from sufficient to address the fundamental problems that stand in the way of true environmental justice.

KEY LESSONS

The chapters in this book provide a rich source of ideas and information about the many dimensions of environmental justice. They do not, nor are they intended to, pretend that there is a settled consensus about the meaning of environmental justice, nor about the ways in which the complex challenges can be solved. The authors approach the topic with different understandings of what environmental justice is, and how it might be achieved. However, it is clear that the foundational commitment to a more just and sustainable world lies at the heart of all of their investigations. In some ways, the heterogeneity represents the richness and depth of commitment rather than presenting an impediment to the pursuit of a more just and sustainable world.

The authors show significant differences in how they see the scope and content of environment and justice. It would be comforting to suggest that these abstract discussions can remain unresolved without adversely affecting the social and environmental interests that all strive to advance. Unfortunately, those chapters which concentrate upon implementation at the 'front line' make it clear that decisions about whether environmental justice is focused upon rights of nature, rights to nature, or some other formulation will impact upon judicial determination of who forms part of the community of justice, what processes for inclusion and determination apply, and ultimately who will be the beneficiaries and whether the benefits will depend upon human use of the environment. As has been well illustrated, moving concepts of environmental justice 'off the page' and into practice requires deep systematic change in governance systems. Whilst the creation of appropriate legal instruments and procedures is an important part of this change, often this will have to be accompanied by more fundamental approaches to empower and support those who are meant to benefit, and to control potential abuses by those from whom power and resources will have to be diverted. True achievement of the outcomes of social justice will require radical reform backed by sustained effort and investment by many people.

The chapters included in this volume reflect the theme of the 11th IUCN Academy of Environmental Law Colloquium. The theme, 'He Tapuwae', a Maori waiata, emphasises that the search for environmental justice is a series of steps towards greater understanding and shared learning.

Realisation of the fundamental nature of the questions raised by the search for environment and justice, and the evidence provided in the chapters of this book, demonstrate that in the pursuit of environmental justice we cannot divorce the political from the practical. Whilst it is important to have leaders who can develop the abstract concepts that will inform environmental justice arrangements, it is at least as important to overcome the many practical challenges. To achieve environment justice requires changes to administrative arrangements, strengthening the capacity of the less powerful, ensuring the integrity of formal governance, changes to land-use and other resourcing titles, creating more effective processes for engagement and substantive desperation, and many other adjustments in society. These practical challenges should be well thought through and aggressively implemented to ensure that the search for environmental justice be expedited so that society can benefit from its implementation.

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