EDS is leading a project which is taking a first-principles look at the resource management system in New Zealand and outlining options for reform. This Working Paper contains an overview of work undertaken to develop a conceptual analytical framework, investigate world views, ethics and principles and identify key lessons from international experience.
Acknowledgements

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The purpose of this project is to take a first-principles look at the resource management system in New Zealand and outline options for reform. This is the first in a series of working papers to be generated by the project. It outlines the matters explored by the project team thus far: (1) the development of a conceptual framework; (2) establishing the context for reform; (3) an exploration of ethics in resource management; (4) a survey of the principles of resource management; and (5) the key insights gained from the Environmental Defence Society's (EDS) recent international study tour. These areas are discussed individually below.

1. Conceptual framework

This section defines New Zealand's resource management system for the purposes of the project and explains how it is to be analysed.

The nature of a resource management system

The basic reason that we construct a resource management system is to provide us with some of the most fundamental outcomes that we want as a society.\footnote{At this point there will be those who point out that environmental management should not be human-centred. This is explored later in Chapter 5 of this paper.}

The first fundamental function of a resource management system is to provide a vehicle for defining our collective aims, and to allow them to change (or not change) over time. However, we need to recognise realities. There will, in many cases, be hard trade-offs and prioritisations to be made. In the future, this will only become more noticeable, as resources become scarcer and potential uses more varied. Making hard, values-based trade-offs between society's wants and between the wants of different people or groups within society is a fundamental part of determining our collective aims.

It is also not enough to consider only what we want. We also need to consider how we get there. Setting out methods to achieve our wants is a second key function of a resource management system. This is not just about specific, technical things like what level to set metrics for water quality. It is also about the kinds of tools we want to put in our toolbox, and the way in which those tools work together.

Setting goals, resolving tensions and creating a roadmap for getting the outcomes we want are all academic exercises if we don't know whether our goals have actually been met, or are at least on the road to being met. Therefore a third key function of a resource management system is to measure what we have against what we want and – to the extent that there is a gap between the two – to change our methods to reduce it. In other words, the system needs an evaluation and feedback mechanism.
Overall, we can see the system as a framework for determining what we want, how we get there, and how far off we are from achieving our goals.

**Defining the resource management system**

A resource management system is not the vehicle for asking the above questions for all kinds of matters (e.g., areas like health and safety). The challenge is to define the system in a way that has a coherent scope and internal logic. Its components need to be sufficiently interconnected – to have real influence over each other – for a system label to be useful. The definition of the system adopted in this project is broad, because the purpose of the project is to take a big picture view of reform.

In short, the definition adopted comprises the aims, design, governance, processes and mechanisms of laws and practices through which public interventions are taken for various purposes: influencing the use, protection, allocation and spatial/temporal distribution of natural and built resources within New Zealand. In even more of a nutshell, it is about how we shape our physical surroundings.

**Conceptual framework for analysing the resource management system**

Traditionally, a resource management system has tended to be analysed in terms of domains (e.g., water, soil, air), spaces (e.g., urban, rural, marine), and sectors (e.g., energy, transport, agriculture). However, these analytical approaches all have a tendency to presuppose at least something. A domain-based approach assumes that each receiving environment can be considered, at least partly, in isolation from the others. Similarly, a spatial approach tends to focus on spaces artificially delineated by humans – the rural-urban divide, the line between private and public space, or the lines between statutory (and often artificial) jurisdictions. This runs the risk of ignoring ecological and other units (e.g., landscape or cultural units) that frequently exist across them. Considering individual sectors risks neglecting the importance of cumulative effects on receiving environments, which may be impacted by a large number of different sectors at the same time.

The way in which New Zealand’s system is explored in this project is by breaking it up into themes. These themes are the broad things that a system must have or must do. There are three levels of themes: normative (what we want); system (the architecture of the system); and operational (the tools to achieve our aims). Within these levels, 12 more specific themes are explored (see Figure 1). That said, domains, sectors and spaces remain useful. They recognize very different contexts to which the system must apply. To be sensitive to this, the project will also stress-test its conclusions on general themes (the basic things the system must have) against domains, sectors and spaces. For example, legal and ethical principles (a theme) may apply differently in the urban and rural settings (spaces), and participatory arrangements (a theme) may look quite different when considering residential development and transport (sectors).

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Figure 1 Themes to be explored
One particular thing should be noted at this point in the discussion: the absence of a dedicated theme in which Māori concerns are considered. In this working paper components of the Māori world, such as Treaty of Waitangi law and mātauranga Māori, are considered within themes. Māori matters are not simply things the system has to address or ‘do’, akin to legislative design or consenting mechanisms. They need to pervade all tiers of the system – norms, system architecture and mechanisms.

2. The New Zealand context for reform

New Zealand’s present resource management system was shaped most fundamentally by the events and ideologies behind the radical political reforms of the 1980s and early 1990s. Large scale reforms to resource management and governance more broadly were reactions against the centralised, non-participatory, interventionist and development-oriented approach of the Muldoon National Government. The reforms were also driven by an increasing recognition of the role of Māori, the importance of accountability in government, a growing environmental movement, the need for integration, and an economic ideology that stressed the value of the free market. The basic constitutional and ideological approach has remained largely intact, despite many (sometimes ad hoc) changes that have been made to institutional and legislative arrangements since.

However, the world in which the system operates has changed drastically. Biophysical environmental indicators have declined almost across the board. Key areas of decline are in biodiversity, freshwater quality, soil, coastal-marine and climate. At the same time, urban issues have become acute, mainly around issues of housing affordability and infrastructure provision, particularly in Auckland. As population increases and resources become scarcer, we are seeing increasing challenges around the allocation of resources. The system itself has been changed many times in response to particular challenges, which has produced its own issues. Our system of legislation and institutions lacks coherence, simplicity and accessibility.

3. Worldviews and ethics

Environmental worldviews and ethics describe our basic attitude towards the relationship between humans and their natural and physical surroundings. While they are usually not expressed formally in legislation or institutions and are often assumed (eg the word ‘neoliberalism’ is nowhere to be found in our statute books despite its enormous influence), they are hugely important as the normative bedrock on which the system is constructed.

A great many ethical theories exist in the fields of environmental and resource management. It is impossible, and not particularly useful, to explore them all. However, it is worth highlighting the distinction between the two broad philosophical viewpoints that many theories adopt: anthropocentrism and ecocentrism. Anthropocentric theories focus on the interests or values of humans as the paramount consideration in making decisions. Ecocentric theories focus on the ethical relationship between humans and the natural world as one of interdependence, partnership or equality.

Under the umbrella of anthropocentrism we can observe a further distinction between economic approaches (those that, generally speaking, focus on efficiency and social welfare, and seek to place a dollar value on environmental goods and services) and non-economic approaches (those that focus on a broad range of human values rather
than monetary quantification). Ecocentrism can also be divided into a number of categories (eg those with spiritual or indigenous flavours, or those focused on animal rights). Although not explored in detail in this paper and earmarked for future exploration, the Māori worldview is more closely aligned to Western notions of ecocentrism than it is to anthropocentrism. Māori values are intertwined with intangible or spiritual relationships (whanaunga) with the environment, which have been described as an intricate and interconnected web with foundations in a complex cosmology of familial celestial relationships. Whether through failures of implementation or something more intrinsic, a largely Western, neoliberal and anthropocentric ethic has failed to achieve the kinds of outcomes we want. That does not mean we need to reject the ethic entirely, but it does mean that we should be aware that such a worldview is a choice, not a natural order. It also means that we should be open to more ecocentric ideas if they can orient our outlook in a way that is more likely to get us to where we want to go.

4. Principles

Principles are normative guides that flesh out our basic worldviews. The key principles that exist in the fields of environmental and resource management are summarised below.

1. **The principle of sustainability** provides a framework within which other more detailed substantive principles can be applied. It is essentially about balancing the value of resource use with the value of environmental protection. Sustainable development is concerned not only with environmental protection, but also with rights to socioeconomic development. Sustainable management, in the New Zealand experience of the term, has a narrower focus of protecting the environment. It seeks only to enable socioeconomic wellbeing.

2. **The principles of environmental justice and distributional equity** seek to distribute the costs and benefits of resource use and protection between groups in present-day society according to equity or sensitivity to harm.

3. **The principle of intergenerational equity** seeks to distribute costs and benefits of resource use and protection between present and future generations, so that at least the basic needs of future generations are met.

4. **The principle of polluter/user-pays** seeks to distribute the costs of resource use between private and public interests. It generally places costs on the polluter or user.

5. **The principle of common but differentiated responsibility** seeks to distribute the costs of environmental protection among the international community. It means that New Zealand bears greater responsibility for the costs of mitigating climate change than some other countries.

6. **The principle of subsidiarity** seeks to distribute the benefits and costs of resource use and environmental protection according to the values of the relevant community of interest. Decisions are made closest to the communities of interest most affected.

7. **The principles of the Treaty of Waitangi** include active protection, good faith, remediation of past grievances, and informed decision-making. In the resource management context, the central idea is often kaitiakitanga (loosely translatable as 'stewardship'), but other important concepts are mauri (life force or essence) and mātauranga Māori (knowledge and ways of knowing).

8. **The public-interest use principle** is a convenient label for a principle that recognises resource management systems should place value on, and incentivise or mandate, some resource uses that are in the public interest.

9. **The conservation principle** recognises that protection and enhancement of the environment must be relatively absolute in some geographical areas. It encompasses the principle of non-regression, which states that measures beneficial for the environment should not subsequently be removed or eroded, and the public trust doctrine, under which the state acts as trustee of the ecological health of public areas.

10. **The precautionary principle** states that where there is uncertainty as to the adverse effects of an activity, this is not a reason to fail to take action to address them. It includes approaches to risk identification, risk assessment, and risk management.

11. **The participatory principle** provides that the public have a legitimate interest in being involved in decisions about resources and the environment that impact on them or are of significant public interest. Such rights are not absolute. They must be balanced against the need for efficiency and timely decision-making. Māori should have relatively strong participatory rights because of their status as Treaty partners. Access to information, transparency of process, and access to justice are also important.

12. **The principle of efficiency** is important in resource management. In terms of process, decisions should be streamlined and use comparable units of measurement where possible, but must be balanced against the need for good information, public participation, and the evaluation of values, not just monetary units.

5. International study tour

In October, the EDS project team conducted a tour of eight countries in Europe and North America during which they talked to leading scholars and practitioners about their experiences and innovative ideas in resource management. These ideas will be considered and integrated into analysis as the project continues. Although the intention is not to judge the merits of these at this
Some of the key ideas that the team came across are summarised below.

1. The system needs to articulate a clear vision and set of desired outcomes for what it is designed to achieve at a national level, and to cascade in more detail to the regional and local levels.

2. Legally binding targets can be extremely effective in changing practice.

3. A planning/management system must be proactive about achieving positive goals, not just reacting to problems.

4. Capacity building in institutions dealing with resource management issues is extremely important.

5. Affordable housing is an effective way to make cities more inclusive, but needs to be expanded to include the idea of affordable living.

6. The system needs to specify a set of clear measurable and binding environmental quality standards.

7. Technology forcing can be effective in achieving environmental goals.

8. Institutions need to be designed to provide incentives for compliance for all actors in the system, including meaningful sanctions.

9. There is value in creating a coherent spatial network of sensitive or important ecological areas at the national level.

10. Using a mixture of integrated and sector-specific regulation can be effective.

11. An effective mechanism to achieve coordination between all policies having influence on each other, at all levels of government, is an important component of a system.

12. Land use and transport planning need to be intimately linked.

13. A broad range of tools need to be deployed to achieve aims, including financial incentives.

14. Flexible zoning should be provided for in cities, including greater use of experimentation.

15. Urban design panels can be a useful tool.

16. Government procurement can be a powerful way of driving change in order to achieve public policy goals.

17. Meaningful public participation can be provided for in innovative ways, not just through an adversarial court system.

18. A system needs to set clear metrics and monitor them regularly.

19. It is important to have an integrated data management system to support decision-making.
1. THE PROJECT AND ITS CONTEXT
Introduction

This project analyses New Zealand’s resource management system and outlines options for reform. It will ultimately make recommendations on what a fit-for-purpose system might look like for the future. The scope of the review is wide because we are adopting a wide definition of the system under analysis. But at its core are the topics of environmental protection, urban planning, and the ways in which we use our natural and physical resources.

Reforms to the Resource Management Act 1991 (RMA) – New Zealand’s main environmental statute – have occurred in a piecemeal fashion since it was passed, producing an overarching framework and patchwork of provisions that at the time of writing in 2017 have lost much of their original simplicity and coherence. An overall review of the Act as a whole is now due. The system through which we manage our natural and built environments is much wider than the RMA, however. For example, it is about infrastructure planning and funding, conservation management, climate change mitigation, the role of iwi, institutional structures, capacity and capability, and a raft of other topics. The ways in which legislation addresses these topics are not always coherent and connected, even though they are intimately related to each other.

It is in this context of complexity and fragmentation that significant environmental challenges have emerged in recent times. Many indicators of environmental health are now rapidly declining. For some – such as freshwater and coastal environments – tipping points appear not far away. Cumulative effects are not being addressed well, and the result has been an inexorable creep towards environmental degradation. Climate change is a pressing issue that needs addressing. Environmental laws like the RMA – now over 25 years old – have not fully realised their aspirations of sustainable resource management and ecosystem integrity.

As well as environmental problems, the system is failing to deliver on social, economic and cultural outcomes. This is particularly evident in large urban areas (especially Auckland), where dramatic increases in population and development pressures, a booming housing market, and a scarcity of resources have caused many to question whether the system remains fit for purpose in the context of cities.

The RMA has always had the goal of integrated environmental management and has been widely admired. It provides a single framework for managing both urban and non-urban areas and for managing land use/urban growth, as well as common pool resources like air, freshwater and the marine environment. But the peculiarly urban problems the country is now facing – such as housing affordability, pressure on infrastructure, and uncertainty as to whether developments will be allowed – are shaking the foundations of this ethos, and provoking difficult questions. Are there better ways to achieve good urban outcomes while not threatening the integrity of the natural environment? Should management focus on
What are we doing and how are we doing it?

The purpose of this project is to take a first-principles look at the resource management system in New Zealand and outline options for reform. Exactly what we mean by ‘the resource management system’ is explored below (see Chapter 3). By ‘first-principles’ we generally mean that we are asking fundamental, future-focused questions about how our overall package of relevant laws and institutions should and can work. We are not just reacting to particular problems or looking at better ways to do the same things. We are asking why we do certain things, whether we should be doing them, and how we should be doing things in the future.

The project involves a phased programme of research and analytical work that considers a range of themes, topics and issues. Its primary lens is a legal one – focused on the optimal regulatory and institutional arrangements – but it also investigates non-legal matters. The analysis encompasses diverse topics, including international law, legal principles and environmental ethics, legislative design, governance and institutional structures, participatory arrangements, and legal/economic tools. It involves analysis of primary and secondary written sources, targeted interviews, an international study tour and workshop sessions. The project will culminate in a series of working papers (of which this is the first) and tangible options for reform. A final report will be produced in late 2018.

Why are we doing it?

The impetus for this work is a growing list of existing and emerging individual problems in the system. Problems are legion, but vary in importance depending on who you talk to. Prominent issues have recently coalesced around the general topics of infrastructure, urban growth, housing unaffordability, water quality, process complexity, and many others. They stem from many different parts of the system. They will be explored in more detail as part of the project.

This array of individual problems is the key trigger for the work; there would be little appetite for reform if everything was working well. But at some point the accumulation of problems becomes so great, and so suggestive of deeper systemic problems, that it merits sitting back and considering how the system works as a whole. This is so we can reflect on its overall health, and not just treat symptoms as they emerge. There is a growing consensus among many people and organisations in New Zealand that we have reached these kinds of systemic reflection points.

In addition, a focus on the wider system presents an opportunity to reflect on future risks and opportunities that may have otherwise gone unnoticed. To the question ‘If it ain’t broke, why fix it?’, we can respond with two answers: ‘Because we may unearth opportunities we did not know existed’ and ‘Because today’s complacency may be tomorrow’s problem.’ Times can change alarmingly quickly. With this project, we aim to continue to broaden the debate around system reform, and influence government to take appropriate steps.
2. OUTLINE OF WORKING PAPER 1
This is the first in a series of working papers to be generated by the project. Its purpose is to present the work undertaken by the project team thus far, to explore and test ideas, and to stimulate discussion. To this end, general questions are posed throughout for the reader to consider. It is an exploratory think-piece, and is not designed to be a comprehensive account, to offer a definitive view, or to make specific recommendations. It is also intended to elicit feedback, which will be fed into the project as it progresses. Any responses can be directed to RMProject@eds.org.nz.

A draft version of this working paper was the topic of discussion at a workshop held in November 2017, and feedback from the workshop has been incorporated. Grateful acknowledgement is made of those who attended and contributed to this process.

This working paper addresses the following matters in turn:

1. The conceptual analytical framework of the project
2. The New Zealand context in which reform would occur
3. The role of worldviews and ethics in informing the resource management system
4. An exploration of legal principles informing the resource management system
5. Standout lessons from international experience (from EDS’s recently completed international study tour)

Structurally speaking, this and other working papers will not form ‘chapters’ in the final report, although their substance will be subsumed in it.
3. A CONCEPTUAL ANALYTICAL FRAMEWORK
Introduction

This section describes the project's conceptual analytical framework: the way in which the system will be analysed. This section first looks at the nature of the research subject – the resource management system – and how it is defined. It then explains how the project divides the system into its constituent parts for deeper analysis.

The nature of a resource management system

At the outset, it is worth reflecting briefly on a couple of fundamental questions: what is the ‘resource management system’, and what is it for? The term sounds technical, confusing, and complex – because it is. Lawyers, planners, economists and academics devote entire careers to understanding, and helping others to understand, the resource management system.

Of course, calling a thing complex is not an adequate substitute for a meaningful definition. The resource management system describes a general idea rather than a concrete term or widely agreed set of rules and processes. In most contexts, people do not choose to use this term at all, preferring the relative precision of a particular statute (like ‘the RMA’), field of study (like ‘law’ or ‘economics’), or resource (‘water management’). To some, the resource management system may evoke visions of town planning, or resource conservation (in the sense of managing rates of depletion). To others, it may recall the protection of public resources (like coastal space or air) from use, or even systems of allocating resources (such as fresh water) to different groups of people. To the more expansively minded among us it may include a grab bag of topics as diverse as roads, housing, mining, forestry, fishing and indeed any measure addressing ‘social, economic and environmental wellbeing’ – the crowning glory of general policy-speak. None of these are right or wrong. The system can refer to any, or all (or even none) of these things. The term is actually not useful or necessary, unless one is considering the relationship between the system’s constituent parts.

The key point is that people can (and do) choose to define the scope of the system in different ways. Complex and lengthy definitions are usually important for precisely this reason – readers need to know exactly how the term is being applied in a particular context. This project is no exception. We will define the scope of the system in our own way, in light of this project’s purpose. We have a very broad take on the system. The definition is explored in more detail below but, essentially, we have conceived the system as a set of human interventions designed to shape how we use, or do not use, our physical surroundings.

For now, it is worth observing something much simpler, yet more profound: the basic idea of a resource management system is one to be conceived of in human, not technical, terms.

We construct a resource management system to provide us with some of the most fundamental outcomes that we want as a society. 3 This is not about finding objective answers by crunching numbers or listening to the pontifications of grave-looking experts in dark suits and lab coats (although experts certainly have their place in the operation of the system). It is a very human question about what we value.

We want a healthy environment. We want to experience nature. We want jobs. We want affordable houses. We want water to come out when we turn the tap on. We expect a blaze of light when we flick the light switch. We do not particularly desire to be stuck in traffic for two hours every day to get to work. We want all of this. And we want more.

People may argue about whether, actually, we do want certain things (eg dense suburban areas). People may also argue about the kinds of topics that should be managed within a single system (where things are considered together, or at least in an interconnected way). Some things may not need to be part of the system. For example, some people may pronounce confidently that resource management has no role to play in making housing affordable, and most would argue that concerns of health and safety should be considered separately. But (for those things that are within its scope) a fundamental function of the resource management system is to provide a vehicle for defining our collective aims, and to allow them to change (or not change) over time. Collective aims can be positive – the attainment of ‘goods’ – whether these be environmental, social, economic or cultural. Despite the negative nature of much of the rhetoric surrounding ‘environmental’ principles, it is important to remember that our aims do not need not be limited to the prevention of ‘bads’. The system is not inherently about stopping us from doing things; it is about fostering, and furthering, the collective human (or natural) enterprise. Constraints on individuals may – and must – come from that, but they do not define the role of the system.

A problem is, however, that we live in the real world. Our society wants many things, but it is not always possible to have them all at the same time. Just as importantly, resource management decisions will always produce winners and losers; it is not often that effects (both positive and adverse) can be distributed perfectly evenly. So even if there is societal consensus that we want an outcome (eg affordable housing), the physical, social or economic reality may be that it will come at the cost of some other things that we – or at least some people – want (such as preserving the character of low density suburbs). We want electricity at the same time as we want a pristine environment. But we cannot turn on our lights without impacting on the environment in some way, whether it be the destruction of habitats from a hydro dam, amenity concerns around a wind farm, or the CO₂ emissions from a coal-fired power plant. A formal system

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3 At this point there will be those who point out that environmental management should not be society or human-centred. This is explored later in Chapter 5 of this paper.
is necessary because what some people want can come into conflict with what others want.

This rather obvious observation – that people frequently disagree – does not mean we should stop pursuing genuine win-win situations. Many will exist, and this is where there are some opportunities for real progress. But we need to recognise realities. There will, in many cases, be hard trade-offs and prioritisations to be made. In the future, this will only become more noticeable as resources become scarcer and potential uses more varied. Making hard, values-based trade-offs between society’s wants and between the wants of different people or groups within society is a fundamental part of determining our collective aims. It is not enough for the system to make a laundry list of all things great and good, and assume they are compatible. Many will not be. This plays out not just at the lofty level of values – what we generally want – but also at the operational level – where specific private conflicts between people must be resolved. For example, hard public-policy conflicts may need to be made between creating a tight urban form and protecting productive soils, but personal conflicts must also be resolved between a smelly pig farming operation and the urban householder next door. But while personal conflict resolution is an inevitable product of the system, it would be a mistake to see it as its primary purpose. Defining and pursuing our collective aims is a much bigger project.

It is also not enough to consider only what we want. We also need to consider how we get there. Setting out methods to achieve our wants is the second key function of a resource management system. While this question is not devoid of value judgements, we can have a more objective and evidence-based debate over the kinds of mechanisms that are likely to prove more or less effective at achieving our goals. This is not just about specific, technical things like what level to set metrics for water quality. It is also about the kinds of tools we want to put in our toolbox, and the way in which those tools work together. For example, in order to reduce our emissions of greenhouse gases, we could put a price on emissions; we could impose regulatory restrictions on emitters; or we could subsidise clean industries. We could do all of them, some of them, or even none of them. We could do some in ways that undermine, or complement, others. In setting methods to achieve our goals we must also be sensitive to a changing world. Our interventions do not bear fruit (or fail to) instantly, and we can foresee huge amounts of social, technological and environmental change in the meantime. It is a lesson that our system must be adaptive, strategic and, to the extent possible, predictive. We must at least keep our eyes partly on the horizon, not only on where we are placing our feet.

Setting goals, resolving tensions and creating a roadmap for getting the outcomes we want are all academic exercises if we don’t know whether our goals have actually been met, or are at least on the road to being met. Therefore a third key function of a resource management system is to measure what we have against what we want and, to the extent that there is a gap between the two, to change our methods to reduce it. In other words, the system needs an evaluation and feedback mechanism.

Figure 2 The basic questions that a resource management system needs to answer

The above observations are a dramatic and intentional oversimplification of what the resource management system does. But, as this paper considers more specific matters, it is worth holding these fundamental ideas in the back of our minds: the system is ultimately a framework for determining what we want, how we get there, and how far off we are from achieving our goals.

Question for discussion

What are the key functions of a resource management system?

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4 For example, in the greening of urban spaces, which has health, social, environmental and climate benefits and next to no downsides.
Defining the resource management system

Of course, the resource management system is not the vehicle for asking the above questions for all kinds of matters. The concept of the system loses its utility if we define it too widely (eg to include asking what we want in areas like health and safety, the Torrens system, or employment law). The job becomes too difficult, solutions too unwieldy, and the overall story too incoherent. But if we define it too narrowly (eg only the RMA) we may lose the value of big picture reform (eg by not including things like funding mechanisms, or the incentives provided by our wider system of taxation). The challenge is to define the system in a way that has a coherent scope and internal logic. Its components need to be sufficiently interconnected and to have real influence over each other for a system label to be useful.

But what is the common factor that means a question should be deemed to be one of resource management? There is a common core of topics that most would intuitively accept as being within scope. Land use planning is one (eg basic zoning rules in a district plan). The protection of the environment is another (eg policies and regulations about biodiversity protection). But there are always grey areas. People may argue whether transport, or local government, or energy, or funding are more appropriately analysed as part of different systems. Here, a more considered approach is needed to ensure that the system is defined in a useful way. There are different ways to do this.

First, we could define resource management by the kinds of outcome sought. At its core may be biophysical environmental\(^5\) outcomes: anything related to the health of waterways, the preservation of biodiversity, the quality of air, and so forth. But (as we see with the RMA) it is impossible to separate environmental concerns from others that may conflict or overlap with them (social, cultural and economic outcomes). Land use planning is sometimes more about achieving social and economic outcomes than it is about environmental outcomes in the traditional sense. Yet to define the system with reference to environmental, social, economic and cultural outcomes is to include the whole range of aims that our society has. Such a wide definition ceases to be conceptually useful or practical. We want affordable housing, for example, but not all ways to achieve this outcome can really be described as belonging to the resource management system.

Secondly, a resource management matter could be defined with reference to specific existing legal frameworks that are closely connected, and in which problems have been identified. In other words, existing statutes could be cherry picked to form the boundaries of the system. It would be possible to identify a core of statutes and identify others based on their degree of connection to that core.

Some of these core statutes may be obvious: there have been some very good suggestions that the RMA, the Local Government Act 2002, and the Land Transport Management Act 2003 be rethought together. Other statutes could exist on a spectrum of relevance, based on how connected they are to those acts (eg the Conservation Act 1987 may be close to that core, and the Maritime Transport Act 1994 further away). However, this does not give us a real sense of what the resource management system, as a concept, is actually about. For example, there is much content within the Local Government Act 2002 that would not by any reasonable measure be considered to relate to resource management.\(^6\) At the same time, important economic and social drivers for how resources are treated may be generated by frameworks not specifically concerned with

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5 The term ‘environmental’ poses its own definitional issues but is primarily concerned with protection of the natural world. See generally D Grinlinton, ‘Defining the nature and boundaries of environmental law’ in P Salmon and D Grinlinton (eds), Environmental law in New Zealand (Thomson Reuters, 2015) at 1-23.

6 For example, bylaws relating to dog control and liquor control.
resource management (e.g., tax incentives). Incentives may even arise from what statutes do not do, in which case a system defined by existing laws would miss important features. There are also risks in a so-called blue sky exercise that treats existing legislation as the starting point. It can lock in existing assumptions about how the system operates, and treat legislative and process design as the starting point for reform rather than its product. Of course, it is extremely important to consider which existing frameworks will be affected by system reform, and the extent of such effect. However, this should be the result of applying a carefully considered definition, not the means by which a definition is created.

Thirdly, we could define resource management with reference to its subject matter. For example, we could choose an extensive list of related topics such as transport, infrastructure, housing, and water. But, for the same reason that an outcomes-based definition has issues, it is not particularly useful to consider all aspects of these topics within one system. A person concerned with resource management could be led into unfamiliar places (such as road safety) if we based a definition only around subject matter.

This project proposes to define New Zealand’s resource management system based on multiple filters: a geographical filter (constrained to New Zealand), a subject filter (constrained to resources/environment), an input/output filter (constrained to management for reasons of public good), and a system filter (constrained to the building blocks comprising a formal system).

**A working definition of New Zealand’s resource management system**

The resource management system operates within the geographical constraint of New Zealand, which includes (with relevant limitations) areas where New Zealand has sovereignty or sovereign rights.

**Resources** can be broadly defined as natural and physical resources. (To the extent that seeing the environment in terms of resources is objectionable, the ‘resource management system’ can be recast as the ‘environmental management system.’) Resources and **environment** include:

1. Both natural resources/environment (ecosystems, including their constituent parts, fresh water, air and atmosphere, land/soil, marine, heat) and built resources/environment (buildings, infrastructure)
2. Both private resources (land, buildings, infrastructure) and public resources (e.g., air, water7, infrastructure)
3. **Urban, rural, conservation** and **marine** resources (across all New Zealand’s geographical areas)

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**Resource management** includes the following public interventions in relation to the resources described above:

1. Regulation: requiring or preventing human action
2. Behavioural incentives: to drive human actions or inaction
3. Funding mechanisms: to channel resources to particular kinds of action

These interventions aim to achieve the following **outputs** for the public good:

1. Influence or shape the spatial distribution of resource use, protection and enhancement (spatial planning)
2. Influence or shape the temporal distribution of resource use, protection and enhancement (strategic planning)
3. Require or encourage the use of resources for social and economic benefit (economic and social planning)
4. Discourage or limit/prevent the use of resources due to its environmental, social and cultural impacts (environmental protection)
5. Influence the restoration and improvement of the environment/resources (active environmental enhancement)
6. Distribute resources to different parties or communities of interest (allocation)

The **system** conceived of here is a description of the way in which all of these human actions (management mechanisms) interact:

1. What aims and objectives we set
2. How we design legislative and regulatory frameworks
3. How we establish and run institutions8 that decide management questions
4. What processes we use for decision-making when managing resources
5. How we implement management mechanisms/tools (including monitoring, compliance and enforcement, evaluation and feedback mechanisms)

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In short, the resource management system comprises the aims, design, governance, processes and mechanisms of laws and practices through which public interventions are taken for the purpose of influencing the use, protection, allocation and spatial/temporal distribution of natural and built resources within New Zealand. In even more of a nutshell, it is about how we shape our physical surroundings.

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7 However, acknowledgement is also made of the existence of broad claims by Māori around the ownership of water.

8 The term ‘institution’ is used here to refer to legal entities, such as councils, courts, or trusts, or corporate or natural persons.
One thing needs to be noted: there are no explicit references to people and communities in the definition above. They are not treated as being ‘resources’ or the ‘environment’. This is deliberate. Of course, people and communities are part of, and not separate to, the environment and resources in which they live. They are not a world apart. However, the system as defined is not intended to encompass the management of people or communities directly. It is about public interventions that shape the relationships between people and their physical surroundings, not public interventions designed to manage people per se. The latter is much too broad; if people were included, the project’s scope would include, for example, regulation designed to limit people’s working hours, or the taxation and social welfare systems more generally. The subjects of the system are intentionally limited to natural and physical resources, but the reasons for intervention explicitly include the management of those resources for social, economic, cultural and environmental benefit. People and communities are at the heart of that and, to the extent that natural and physical resources are involved, the system can be described as including social and economic planning. Furthermore, what the aims of the system are – in which people and communities will be extremely important – is not a matter of defining the system, but rather one of analysing it.

No definition will be perfectly precise, and this may be for the best. The resource management system needs to be conceived as a series of connected parts, and thus be open to extension and compression based on the type and degree of connection that is found when analysing any particular aspect. For example, construction standards for private buildings may fall within scope, but their connection with other parts may prove to be too tenuous to be useful.

One final note should be made about the scope of the system defined above. The purpose of this project is to make concrete recommendations to government (or any independent review panel which may be established on the topic) for reform. As such, it deliberately limits the system to questions of management – that is, active public interventions that are imposed (or deliberately not imposed) to influence public and private action (being regulations, funding and other incentives).

That is not to demean the importance of behaviour change at the level of individuals or companies, which can be affected by other drivers. In fact, there is a huge informal sociological and economic system that affects how people use resources and the environment. For example, if I choose to sell my land to an urban developer, that choice has profound implications for how the land will be used. The constrained definition simply reflects the purpose of this work, which is not to make moral exhortations directly to private persons to do things differently. Rather, it is to make recommendations to public authorities for the reform of a formal system that results in persons doing so. For example, the report will not say whether, and to whom, I should sell fresh water on my land. What it could describe are the interventions needed to determine whether I am allowed, or incentivised, to do so. Of course, ethics and principles still form an important part of the resource management system, but not because of their direct influence on people. Their importance is in determining whether public interventions are needed and in guiding what they should aim for and look like.

Questions for discussion

- Is the resource management system, as defined, sufficiently wide, and sufficiently constrained, to be useful?
- To what extent should existing legal frameworks be used to define the resource management system?
- To what extent are types of subject matter useful in defining the resource management system?

Conceptual framework for analysis of the resource management system: Options

We have considered broadly what the resource management system is for, and its (fairly wide) definition. It has many moving and interrelated parts (eg many institutions, statutes and aims) that need to be considered. However, a definition is primarily about scoping the boundaries of inquiry, and does not itself provide an effective framework for analysis. This section now considers the question of how the system can be ‘chunked’ into meaningful and manageable units for analysis.

There are different kinds of conceptual frameworks that could be used in a study of this nature (ie there are multiple ways in which we can chunk the resource management system). A number of efforts have been undertaken in recent years to consider reform of the system. Each uses quite a different conceptual framework, partly because each approaches issues from a particular perspective or with a particular component of the system being placed in the spotlight (eg infrastructure, local governance, or urban planning). There is nothing wrong with this. Yet it is worth emphasising that the approach taken should reflect the purpose of the exercise. A focus on urban planning is appropriate if we wish to optimise urban outcomes. A focus on governance

9 The taxation system is important, but only where it also forms part of the resource management system (where it has a bearing on the use, protection, or allocation of natural and physical resources as defined). For example, taxation has a bearing on how local government is funded to deliver resource management services; how attractive investment in ‘green’ industries is; and how urban form develops. Tax has huge power to shape society and economy, and thus is much more systemic a concern than just a tool for internalising externalities.

is appropriate if the end game is improvement in how we structure our institutions. But a genuine blue skies approach to system reform – where the system is defined widely – requires an inclusive framework where all of these components, and more, interact closely together.

**A domain-based approach**

One traditional conceptual framework for analysing the resource management system in New Zealand is according to environmental ‘domains’ (eg air, water, soil and marine). It is not uncommon to see relevant analyses with chapters having headings of this nature. This is, essentially, a classification based on the character of different receiving environments. It is becoming common for land and even urban environments to be treated as domains in their own right, even though they do not share the same kinds of features as the other domains (eg urban environments still contain air and water, and land still contains soil and biomatter).

![Figure 3 The resource management system by domain](image)

**A sectoral approach**

Another option for a conceptual framework is to consider the different ways in which humans use resources. This focuses on the categories of use, rather than the receiving environments on which those uses have impacts. For example, we could look first at agriculture, then at mining, and then at fisheries. This sector-specific analytical framework has, in the past, been a common way of analysing the system, and is still reflected in the structure of laws in other jurisdictions (notably in Europe, where it is not uncommon for environmental laws to be targeted at particular industries).

In recent times this has been a less fashionable analytical approach in New Zealand, given the push for integrated and effects-based management that has been a hallmark of the system since the RMA was passed in 1991. The RMA generally treats activities according to their impacts on particular domains (receiving environments), not according to their sectoral classification, and it is in this way that many New Zealand stakeholders have come to understand the system as a whole.11

11 Of course, this is not entirely the case. Separate sectoral regimes exist for fisheries, mining and forestry, to name a few (although the kinds of reasons these sectoral regimes exist are generally different to the reasons the RMA exists, and this is one area to be considered specifically in subsequent working papers).

![Figure 4 The resource management system by sector](image)

**A spatial approach**

A third option for a conceptual analytical framework is to consider the spatial surroundings in which human activities occur. This considers the character of an area (eg rural, urban, conservation or marine) on the quite reasonable assumption that the management of resources in one of these areas should look quite different to the management of resources in another. We do not allow cows to wander down Auckland’s Queen Street, nor do we allow the construction of an oil refinery on conservation land.

As a conceptual framework, a spatial approach can be differentiated from a domain-based approach because one spatial area may contain multiple domains (receiving environments). For example, an urban area (a spatially defined category) will contain rivers, air and soil (domain-based categories). For this reason, it can be problematic in an analytical sense to include categories like ‘urban’ and ‘rural’ alongside other receiving environments in a domain-based analytical approach (although this is often done). Their character is different.

There may be considerable alignment between some spatial categories and domains (eg ‘marine’ can be either a spatial label or a receiving environment). However, for analytical purposes it is useful to be clear and consistent in the sense that we are using such terms. If we do not do this, we run the risk of jumping to conclusions without a
proper analytical basis. For example, if we consider ‘urban’
to be a domain separate to the water, soil and air within
that defined space, then we can neglect the important
links between, for example, different parts of a waterway
that spans the urban-rural divide. We may assume that all
components of resource management in one space need
to be considered and managed separately from those in
another space, without considering more carefully and
targeting what really makes urban areas different. The
difference is certainly not the existence or non-existence
of waterways. We don’t demand different criminal laws in
urban and rural areas, even though the patterns of crime
and specific responses may be quite different in each.

Figure 5 The resource management system by spatial
category

Risks of domain-based, sectoral, and spatial
approaches
All of the above approaches have positive and negative
features. On the positive side, it is obvious that we need
to consider what makes the management of some
domains, spaces and sectors different from others.
Water management clearly has different demands from
the management of petroleum (not least because of
present differences in ownership). Urban environments
clearly cannot be managed in the same way as rural
environments (if nothing else, the proximity and conflict
between people in cities makes this a necessity). And
what is needed for the effective and sustainable working
of an oil refinery is clearly different from what is needed to
make a successful and sustainable dairy farm.

But the most fundamental risk is that domain-based,
spatial and sectoral approaches to analysis all have a
tendency to presuppose at least something. A domain-
based approach assumes that each receiving environment
can be considered, at least partly, in isolation of the
others. In reality, they are intimately connected across
varying spatial scales. There is a growing realisation
of the need for true ecosystem-based management,
where entire biological and physical communities are
the unit of analysis rather than water, air or soil. Similarly,
spatial approach tends to focus on spaces artificially
delineated by humans – the rural-urban divide, the line
between private and public space, or the lines between
statutory (and often artificial) jurisdictions. Today’s rural
may well be tomorrow’s urban. Today’s public space
may be privatised next week. Today’s local council may
be amalgamated with another next year. Looking at the
management of the rural, urban, marine and conservation
space runs the risk of ignoring ecological and other units
(eg landscape or cultural units) that frequently exist across
them. Considering sectors is not only hard to do (there
are thousands of potential categories, to which some
European environmental regulations attest), but also
risks neglecting the importance of cumulative effects on
receiving environments (which may be impacted by a
large number of different sectors at the same time).

An alternative approach: Thematic
The conceptual approach in this project seeks to capitalise
on the benefits of each of the above approaches while
mitigating their risks. In a nutshell, the project will consider
the system in terms of themes. This is reflected in the
proposed structure of the final report, each chapter of
which addresses one theme (see Figure 6).

‘Theme’ is another difficult concept to define. In this
project, the intention is that themes define the kinds of
things the system as a whole must do. The themes have been ordered into three categories: the normative level; the system level; and the operational level. This generally reflects the observations made earlier in this paper about the basic functions of a resource management system (determining our wants, mapping a pathway to get there, and evaluating success).

The 15 themes identified above cut across domains, sectors, and spaces. In other words, no matter what the domain in question, no matter what sector, and no matter the space in which activities occur, these thematic questions must be answered in some form. For example, the theme of public participation is one that must be considered irrespective of the sectoral, spatial or domain context. Asking these broader cross-cutting questions allows us to consider what we actually want overall, and helps to encourage coherence in the system.

**Mitigating the risks of a thematic approach**

The principal risk with a thematic approach is that it can underplay the things that make sectors, domains and spaces warrant fundamentally different treatment. For example, the principles that govern air quality may be different to the principles that govern water quality. The design of legislation may need to be different to address the particular challenges of rural spaces as opposed to urban spaces.

But that does not diminish the value of having an analytical framework focusing primarily on, and structured around, themes. For one, it makes it much easier to consider the big-ticket questions that are more and more on New Zealanders’ lips. For example, we do not ask ‘what do we want to achieve for water management?’; we ask, instead ‘what do we want to achieve in managing our country’s resources, and how does this apply to water?’. We do not ask ‘should we charge for water use?’; we ask, instead ‘who should pay to use public resources?’ and then ‘what makes water so different to oil and gas?’

There are also ways to mitigate the risk of underplaying spatial, sectoral and domain-based differences. After we consider the high level thematic questions, we can stress-test general conclusions against particular domains, particular sectors, and particular spaces in order to mould and tailor those as needed to different contexts as required (see Figure 7). This moulding of the general to the specific remains extremely important. It provides both a robust starting point of consistency and coherence (eg ‘this is how we feel about public participation, the role of planning and the role of economic instruments’) and deviates only to the extent needed to recognise the peculiarities of different domains, sectors, and spaces (eg ‘should planning rules be able to overcome market pressures for urban growth?’).

Consider, as one example, two proposals: a hydro dam and a person’s new home. A sectoral approach may conclude that a hydro project requires a high level of public participation and transparency relative to that for the infringement of a setback rule for a new house. But a thematic approach can make a more significant observation: projects in which there is a significant public interest or projects having widespread and large adverse effects require a higher level of public participation and transparency relative to those that do not. It is not really the fact a proposal involves a hydro dam that makes it different. It is the extent of the activity’s impacts. A theme-focused approach is better positioned to consider the reasons why particular cases should or should not deviate from general conclusions.
The themes

As to the themes themselves, we need to have a complete picture of what any resource management system needs to include and needs to do. This is not the same as the substantive outcome that the system needs to achieve. A system is not just about aims and outcomes. A system also requires institutions, legislation, processes and many other features in order to work. They are all important themes.

Of course, themes do not exist in isolation. It would be a mistake to ignore the important relationships between themes. Just as water is connected to land and to air, so too are themes connected to each other. And we cannot delve into themes at random. To some extent this is intuitive – it would feel very wrong to consider consenting processes and the role of economic instruments before we had considered the way in which humanity perceives and interacts with the natural world, or the role of the market.

Answers to the higher level questions influence our approach to the lower level questions.

For analytical purposes, it makes sense to conceive of the relationships between themes as broadly linear: starting with norms (what outcomes we ought to pursue, such as principles), then considering components of the system needed to achieve them (the architecture we need to establish, such as legislation and institutions), and ending with how we implement them (the mechanisms such as plans, consents, processes and incentives). The conclusions of the prior exercise inform the consideration of the latter: we cannot consider how we design legislation without considering first what we want legislation to achieve; and we cannot consider the nature of plans without considering the kinds of legislation under which they would operate.
One particular thing should be noted: the absence of a dedicated theme in which Māori concerns are considered. It is common to see analyses of the RMA and resource management system containing this kind of chapter. Here, it is deliberately not included as a separate theme. Components of the Māori world, such as Treaty of Waitangi law and mātauranga Māori, are integrated into other themes (e.g., governance and principles).

Māori matters are not simply things the system has to address or ‘do’, akin to legislative design or consenting mechanisms. They need to pervade all tiers of the system – norms, system architecture and mechanisms – so that Māori perspectives are fully integrated, not treated as an add-on, afterthought, or a group of matters placed in opposition to (or as grudging concessions to) a dominant Western paradigm. To treat them as a separate theme would deny their potential for synergies with other matters and partition Māori issues from their broader systemic context. That said, and for the same reasons, they must receive particularly close attention within themes.

Stress-testing themes: Identifying domains, sectors, and spaces

Equally important are the domains, sectors and spaces against which the general conclusions on themes must be tested and moulded. Although there are many important nuances, spatial categories in New Zealand can be broadly defined as urban, rural, conservation and marine, although an important spatial overlay for all of these is the coastal zone (which can be urban, rural, conservation or marine).

Domains can be loosely grouped into the categories of climate, air, freshwater, marine, soil, and biodiversity, although the concept of the ecosystem or the biosphere (the natural system of interactions between domains) is always an essential umbrella for any such analysis.Domains are a difficult concept to define. They can be described broadly as resources, as components of the environment, or as receiving environments. They essentially focus on dividing the biophysical world into parts to which we assign value and to which different kinds of harm can be done (or from which different kinds of harm emerge). Outside of this common thread, domains can vary
wildly in their characteristics. For example, biodiversity is living, whereas water is non-living. The climate and the air are contained within the same physical space, although they are treated as separate domains because the kinds of harm emerging from each are different.

A notable omission from this list is land. Land is often considered as an environmental domain, but is a curious concept that defies easy categorisation. When people refer to the ‘health’ of the land, what they are generally referring to are the domains closely connected to land: soil, fresh water and biodiversity. This is about the intrinsic value and broadly defined ecosystem services (including health and psychological benefits) provided by the physical and natural world.

‘Landscape’ is a more complex term which integrates a large unit of the biophysical environment and the human values associated with it. These values can include aesthetic ones (such as a wild, scenically attractive vista), cultural ones (including the very deep and multifaceted relationship of tangata whenua with the land) and historic ones (past associations with the area). So managing landscapes is not about protecting the biophysical components for their own sake; nor is it about managing relationships between people’s activities (i.e., ‘land’ as described below). It is about the relationship between biophysical features and people’s experience/perception of them as influenced by the social/cultural/spiritual context.

But there is another sense in which we talk about land that is quite separate to its physical components (domains) or landscapes. This idea of land is not actually a physical one. It is a construct in which we choose to manage the three-dimensional space above the soil (and sometimes above water) in order to manage the direct relations between people. We are not really managing the land at all; we are managing the impacts on others of what people do on the land when they are in close proximity to each other. It is about the spatial distribution of activities.

This is not always an obvious distinction in New Zealand, where land use planning and environmental management have for a long time been inextricably linked under the RMA, and where environmental effects encompass direct impacts on people’s social wellbeing. Almost every kind of impact is an impact on the environment. But, while we may define the environment broadly under the RMA, and where environmental effects encompass direct impacts on people’s social wellbeing. Almost every kind of impact is an impact on the environment. But, while we may define the environment broadly under the RMA, land use planning is, at its root, about something quite different and additional to the management of its ecological and physical parts. For example, a (hypothetical) resource management system could result in healthy soils, thriving biodiversity, and waterways clean enough to drink from. But no matter how perfect these biophysical outcomes, an additional kind of management would still be needed to produce desirable land use outcomes.\textsuperscript{12} For example, the environmentally perfect scenario described above could still produce land use patterns driving conflict, social disconnection, poor health and unhappiness (an example often given is a highly dispersed, sprawling, car-reliant city). This kind of concern is usually more prominent in urban areas, because more people exist (and do things) in close proximity to one another. Thus land use planning is often recast as \textit{urban} planning, although it applies equally outside cities.

This discussion is not at all to presuppose that land use planning and environmental management should be separated, or integrated, in a legislative sense. There are both synergies and conflicts between the concepts, which must influence a discussion of whether they should be considered together or separately. Here, we simply observe that land use planning is a concept having quite a different character, and historical development, from the management of the biophysical components of the land. Ultimately, ‘land’ seems an unnecessary unit of analysis. This is because in its planning sense it is really a spatial concern (where things/people are put in relation to other things/people) and thus covered by spatial categories: urban, rural and conservation (and, to a growing extent, marine).

It is challenging to define an appropriate range of ‘sectors’ – the kinds of ways in which people use resources. There are potentially thousands of such categories (from mussel farming, to power stations, to bungy jumping) and there may be completely different kinds of uses in the future. There is no way to conduct a deep analysis of all of them. Because the primary reason the system is concerned with sectors is their adverse impact on the environment (although their social and economic benefits are also important), it makes sense to group activities according to the kinds of environmental effects they have. One coarse way to do so is to put them into industrial, agricultural (or similar), commercial and residential categories. Some kinds of activities cross such boundaries, and some (such as tourism) pose difficult and important issues that warrant particular attention within and across these categories. In addition, some sectors are closely managed for reasons other than their adverse environmental impacts (usually to achieve a public good). Among these are transport, energy, mining, telecommunications and other forms of infrastructure. To the extent that their management falls within the scope of the resource management system, they need to be considered specifically.

\begin{table}[h]
\centering
\begin{tabular}{|l|}
\hline
Questions for discussion  \\
\hline
\textbullet Are the key themes covered? Are there particular subthemes or questions within each that warrant special attention?  \\
\textbullet Is the proposed treatment of Māori issues right?  \\
\textbullet What sectors or sector-specific issues should receive particular attention in analysis?  \\
\hline
\end{tabular}
\end{table}

\textsuperscript{12} This is not to presuppose what that management would look like. For example, some may advocate for strict regulations like metropolitan urban limits, while others may advocate for a system that relies on market incentives. The point is that the kinds of outcomes we are concerned with – land use – are of a different character to the health of land’s biophysical components (soil quality, erosion, groundwater, etc.).
4. THE NEW ZEALAND CONTEXT IN WHICH REFORM WOULD OCCUR
Introduction

In any attempt to consider the reform of a whole system, a decision needs to be made as to what degree the project should start with a blank slate and to what extent it should start with a close analysis of the context in which the reform would have to occur. In broad terms, the choice is between taking a blue skies approach and taking a problem-based approach. This project seeks to navigate this choice with care. It steers a middle path.

Context is important for reasons other than the identification of problems. To use the historian's mantra, we need to understand where we have come from to know where we are going. We cannot afford to repeat the mistakes of the past. But we also need to understand our own unique historical, social and cultural circumstances that have shaped who we are as a nation and where we have got to, because they will inevitably colour our future as well.

This section does two things. First, it sketches out in brief the historical development of the system we now have. Secondly, it describes the kinds of challenges we are now facing. The project will also be investigating likely future challenges facing New Zealand in an additional piece of work.

Historical context of New Zealand’s resource management system

As with the character of the country itself, New Zealand’s present system of resource management is very different to the one it had a century ago. Originally, as in most Western countries, the management of resources was considered to be one of property protection and minimising impacts of resource use on other people’s health and property (the origins of ‘environmental’ law can be traced back to private law concepts like trespass and nuisance). Internationally, the impacts of the industrial revolution highlighted the importance of spatially separating harmful and vulnerable activities, and New Zealand went through various iterations of dedicated town (and country) planning laws prior to 1991. Until that point, planning and environmental controls were considered to be quite separate things.

The most significant immediate context to New Zealand’s present system of resource management can be found in developments that occurred from the 1960s to the early 1990s. It was not until the 1960s and 1970s, in the wake of the international environmental movement, that New Zealand started to implement laws specifically targeting environmental health. This was done in a fairly ad hoc way, and by the start of the 1980s a large number of resource and issue-specific statutes were in existence. At the same time, the 1960s witnessed a proliferation of the consumer society, including the emergence of an increased ideological attachment to the private motor vehicle and the demand for associated infrastructure.

The politics of the late 1970s and 1980s played a central role in producing the system we have today. The National Government of Robert Muldoon (1975–1984) pursued an economic policy that aimed to free New Zealand from reliance on oil imports (in the wake of the 1973 oil price shock), including by expediting the process by which strategic energy projects were implemented. This strategy was given the label ‘Think Big’ and its apogee was the National Development Act 1979, which essentially allowed Cabinet to suspend a variety of other Acts (including many with environmentally focused restrictions and processes) in order to fast-track large scale government-backed infrastructure projects. The role of the courts was also significantly curtailed. The Act was partly a reaction to the slow, difficult and fragmented approval processes that would otherwise have been needed. Project-specific legislation was also implemented by the Muldoon Government to authorise the construction of the Clyde Dam on the Clutha River, in order to circumvent the usual judicial process.

This was only one among a number of controversial measures taken by the government that had constitutional significance, and so it was in a constitutionally and ideologically charged environment that David Lange’s Labour-led Government came to power in 1984. The context was one in which there was political and public appetite for fundamental change in the way that the country approached social, economic and constitutional issues. There was a reaction against the centralised, non-transparent and economically interventionist approach that drove measures like Think Big. As in other key areas of policy (particularly economic policy), this reaction eventually forced fundamental change in the resource management system.

The National Development Act was repealed, but it left a big issue in its wake: the Act may have been an undesirable solution, but the big picture problems to which it responded were still very real. The resource management system was fragmented across multiple statutes and institutions; processes were complex and time consuming; and there was little normative consistency. Recent events had opened the gates for system reform on a wide scale and on a considered, principled basis. The spirit of the times was one of fundamental and ideologically driven change. Alongside this social and economic agenda was an increasing recognition of the role of iwi, particularly through the 1975 establishment and subsequent energetic activities of the Waitangi Tribunal, and through the recognition in the courts of the principles of the Treaty of Waitangi.

The central development in relation to resource management during the late 1980s was the drafting of a new Resource Management Act, initiated by a Labour-led Government and eventually passed in 1991 by a
National-led Government after an extensive process of expert involvement, public consultation and cross-party support. But the wide ideological basis of reform meant that its boundaries were not defined by pre-existing statutes, institutions or conceptions of the environment. Around the same time, fundamental changes occurred in New Zealand's institutional arrangements. Many of these changes were driven by free market ideology, a desire for accountable government and removal of conflicts of interest, and a reaction against interventionism (eg in the creation of state-owned enterprises and the disbandment of the Department of Education). Many had direct impacts on resource management. The Ministry of Works, which had sponsored large government infrastructure with significant environmental impacts such as hydro dams, as well as housing the Town and Country Planning Division (which kept a close eye on council planning functions), was disbanded with its policy functions transferred. A new Ministry for the Environment was established by statute to provide advice to its Minister. At the same time, the Office of the Parliamentary Commissioner for the Environment was created to act as an independent watchdog and investigator, and a Department of Conservation was established to manage the conservation estate and act as an advocate for the environment. The Planning Tribunal was recast as the Environment Court, assuming many supervisory functions under the RMA. Fundamental reform to local government structures also occurred: myriad small councils were amalgamated into larger entities known as territorial authorities, and regional councils were established along catchment boundaries. Both were given significant roles under the RMA.

The RMA was at the core of legislative change in this period. The Act was a product of the tumultuous political context of the previous decade, and was based on constitutional principles, increasing environmental consciousness, and a particular brand of economic ideology – one focused on efficiency, deregulation and faith in the market. That is not to say that the Act was anti-interventionist. In fact, it saw a strong role for public intervention to safeguard environmental health, and to enable people to provide for their own social, economic and cultural wellbeing. However, it was not a social or economic planning statute. Faith was placed in people, as economic and community actors, to provide for their own wellbeing. These can all be seen in some of the Act’s key features, which are summarised below:

- **Sustainable management**: An overarching, consistent statement of purpose for most natural and physical resources that had previously been managed under regimes with arbitrary normative differences.

- **Integrated management**: The recognition that all domains are interconnected. Previously, many different sector and resource-specific statutes had existed. However, some notable exceptions still persisted. For example, it was considered too difficult to manage the exploitation of finite minerals under the principle of sustainable management. More active economic and allocative management of resources continued to occur outside the RMA, for example fisheries and indigenous forestry.

- **Effects-based management**: Decisions were to be made based on the actual and predicted environmental impacts of activities, not on the sector/industry in question or on a desired public social/economic outcome.
• **Simplicity, navigability and plain English:** This was to ensure open government and a participatory process that was not thwarted by overly complex and confusing language or legislative structures.

• **Open government:** Government entities were to be treated the same as any other party under the law.

• **Māori values and involvement:** The RMA sought to formalise Māori values and participation (and, to a more limited extent, decision-making power) in legislation, which had previously been largely overlooked.

• **Public participation:** There would be single and inclusive process for producing plans, as well as extensive notification and appeal rights for resource consents.

• **Devolution:** While there was to be an important role for central government in setting national policy and standards, most decisions would be made by regional and local government (aspects of coastal management being a notable exception).

• **Independence and accountability:** There would be checks and balances to prevent the abuse of power. Regional and local government would be responsible for most decision-making (accountable), but there would be an appeal process to the Environment Court which would act as a national level independent overseer.

• **Enabling and laissez-faire:** It was generally considered that the market would be best to allocate scarce resources and determine which uses occurred, not government.

• **Environmental bottom lines:** The RMA always envisaged that the market would be left to make resource use choices, and people would be left to manage their own affairs, as long as environmental biophysical bottom lines were not infringed. These bottom lines were to be not only about the value of the environment to humans, but also its intrinsic value.

Key aspects of the system continued to be managed outside the RMA (eg transport planning, minerals allocation, fisheries management, and species conservation). However, practically none were left completely untouched by the far-reaching regulatory and institutional reforms of the time.

Since the RMA was enacted, there has been no comparable sea change in social or economic ideology as occurred in the 1980s and early 1990s. The bones of the system, centred around the RMA and associated institutional structures, have remained largely intact. However, there have been many smaller changes to the system, which amount to significant changes in a cumulative sense, as well as some interesting trends. The system in 2017 would be recognisable to someone familiar with that of the early 1990s, but would also look significantly different in many respects.

The RMA itself has been amended many times. For the most part these changes have occurred in order to respond to particular problems or agendas. Key amendments have related to planning and consenting process, public participation, ministerial powers, the role of iwi in planning, aquaculture, trade competition, climate change, and the allocation of occupation rights in a more proactive manner in the marine and coastal area. The normative heart of the Act has remained largely untouched, despite attempts to change Part 2 in fundamental ways. There was much debate and inconsistent jurisprudence about the correct interpretation of Part 2 of the Act until the Supreme Court's 2014 decision in *King Salmon*.

Additional legislation has also been introduced and amended. Legislation addressing hazardous substances and new organisms was enacted in 1996, a new Local Government Act was passed in 2002, the Land Transport Management Act was passed in 2003, and legislation establishing special housing areas appeared in 2013. Climate-focused legislation was passed in 2004, which served as a framework for the development of New Zealand's primary response to climate change: an emissions trading regime. The divisive debate over ownership of the foreshore and seabed resulted in the Marine and Coastal Area (Takutai Moana) Act in 2011, which adds another layer to planning arrangements for this area. A new resource management regime for the exclusive economic zone and continental shelf, after a long gestation period, was enacted in 2012. This resembles the RMA in many respects, but in a much simpler form (such as making no provision for the preparation of plans). Most recently, a detailed proposal for legislation creating urban development authorities has been floated to fast-track housing and urban regeneration projects. Various statutes implementing Treaty settlements have been enacted, some of which interact with or impact on more general resource management regimes.

There have also been some significant institutional changes since 1991. The national level Environmental Protection Authority was established in 2011, and was tasked with functions under various pieces of legislation, including hazardous substances and new organisms. Ad hoc boards of inquiry received the power to decide some resource consent applications. The Land and Water Forum was established to bring key stakeholders together in order to formulate national freshwater management policy and provide advice to government. Special legislation has also been passed in relation to Auckland issues; mass amalgamation produced an Auckland unitary authority in 2009, followed by a spatial plan for the city. The Auckland Unitary Plan – in a sense the culmination of this process in resource management terms – was subsequently developed and is now partly operative.

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Resource management challenges

It is against this backdrop of legal and institutional arrangements that an increasing appetite is emerging among stakeholders for more fundamental reform. New Zealand is facing an array of challenges, and there is a sense that our current system is not currently, and will not in the future, be fit-for-purpose in meeting those challenges, even with the myriad and constant changes that have been made to it. The use of the term ‘challenge’ rather than ‘problem’ here is deliberate. Some of the challenges we are facing are not objectively identifiable problems that are capable of being solved. Some involve difficult trade-offs and the existence of others depends on whose perspective you take. These require not a solution, but rather a resolution. In any case, this section is designed to outline, at a high level, the key challenges currently facing New Zealand that have appeared in the literature and other commentary.

Poor environmental outcomes

Many of the indicators of biophysical environmental health in New Zealand are poor. Many are getting worse. A number appear to be reaching significant tipping points, beyond which they may not recover, or recover only with difficulty. These are significant challenges. We only have one environment, and its bounty is not inexhaustible.17

Indicators of environmental health can be broadly categorised by domain – the kinds of resources or receiving environments that we value (eg air or water). More accurately, we value their existence in particular stable states, which is effectively what we mean when we refer to environmental ‘health’ or ‘quality’. Such concepts are subjective, but there is generally wide consensus about what they mean – at least roughly – in the context of the biophysical environment (we all recoil at the sight of a polluted river).18 The states in which we desire the environment to exist are based both on its ability to provide services to people (eg drinking water that does not make us sick) and the intrinsic value of parts of it (eg the existence of wilderness or the right to life of plants and animals).

State of the environment reporting by government and other measures of environmental condition (such as the number of threatened species) indicate an environment under stress. Some of the more recent data include:19

- **Biodiversity**: Biodiversity outcomes are overall very poor and worsening. Indigenous species facing extinction include 81% of bird species that breed in New Zealand, 72% of freshwater fish, 88% of reptiles, 100% of frogs and 27% of resident marine mammal species. Since 2005, the risk of extinction has increased for 7% of our threatened freshwater, land and marine species. Key drivers of biodiversity decline include ongoing habitat loss (eg 10,000 hectares of indigenous forests was lost between 1996 and 2012), and invasive pests and weeds.

- **Freshwater**: Overall, nitrogen levels in rivers appear to be increasing and phosphorus levels decreasing. Nitrogen concentrations in rivers (which are monitored) are 18 times higher in urban areas and 10 times higher in agricultural areas than within indigenous forested areas. Nitrogen leaching from agricultural soils is thought to have increased by 29% between 1990 and 2012 (along with dairy intensification) and nitrogen levels have been worsening at 61% of monitored river sites within agricultural areas (with 22% of sites improving). The deposition of fine sediment in riverbeds is thought to be elevated (covering around 29% of riverbeds compared to an estimated 8% in pre-human times). There is no national reporting on the state of water quantity, but we know that 51% of water take (excluding hydroelectricity use) is for irrigation purposes.

- **Soil**: Around 190 million tonnes of soil are lost into the aquatic environment every year. It is not clear whether the rate of loss is increasing or decreasing, although there may have been a downward trend since the 1980s, as marginal land has reverted to scrub and areas of plantation forest increased. Over half the soils measured under dry stock, and nearly 80% of soils under dairy farming, are impacted by compaction which reduces soil productivity.

- **Coastal and marine**: Monitoring of the state of our coastal and marine areas is poor, but we do know that many coastal habitats and ecosystems are degraded, with the greatest pressures on them being ocean acidification and climate change, excess sedimentation, seabed trawling and dredging (which has been decreasing), marine pests and excess nutrients.

- **Air**: Air quality is the one success story, with significant improvements being achieved over the last decade. This has been due to a shift to cleaner home heating, improvements to fuel and stricter emission limits on new vehicles, leading to 14% fewer premature deaths from air pollution.

- **Climate change**: Gross greenhouse emissions have increased by 24% between 1990 and 2015, mainly due to an increase in road transportation and agricultural production. Net emissions rose by 64% during the same period due to higher logging rates (and less replanting). Almost half of New Zealand’s total emissions are generated by agriculture.

Poor urban outcomes

At the same time as the health of the natural environment is declining, New Zealand is facing substantial challenges...
in the urban setting. This is not to suggest that ‘natural’ and ‘urban’ challenges are mutually exclusive: trees, water and air exist in cities as much as they exist outside them. Natural environmental indicators are arguably more important in cities in terms of their benefits and risks to human health (eg the necessity of clean water supply for more people, and the psychological benefits of green space for dense populations).

In recent years, in New Zealand, the debate has tended to focus on two adverse urban outcomes in particular: housing unaffordability and transport difficulties. The cause, or at least the accelerator, of these challenges has been rapid and sustained growth in and around Auckland. This has led to many different definitions of the problem: a slow and unresponsive system of urban land use planning; misalignment between land use planning and the infrastructure investment needed to realise those plans; a lack of capacity in the construction sector; tax incentives for speculation in the real property market; a passive approach to construction by central government; cultural expectations around suburban living and NIMBY resistance to densification; a failure of the market to respond to demand at the low end of the housing market; immigration policy; rules around foreign investment; and others. Some have suggested, with some truth, that the market-reliant and effects-focused RMA is not really an urban planning statute.

The land transport system in Auckland is also extremely congested, especially the roads. Again, the root cause of this problem is debatable. It is possible to blame a public underinvestment in roads, or (somewhat paradoxically) an excessive investment in roads (and tacit support of a transport system with private motor vehicles at its heart), underinvestment in public transport, or a lack of proactive coordination between land use and transport planning. It is also possible to blame the system of land transport funding and constraints on local government spending, or limits to the economies of scale possible within existing local government administrative units. Cities are also facing the looming challenge of upgrading and replacing ageing water and wastewater infrastructure. While not only an urban problem, challenges with transport and other infrastructure are manifesting most noticeably in urban areas. More generally, brownfields urban developments that could provide economic and social benefits (including but not limited to housing) are difficult, expensive and time consuming to realise.

**Questionable allocative outcomes**

The resource management system restricts the use of resources, but in doing so it also determines, in practice, who is granted the right to exploit them. For example, granting an application to take fresh water for irrigation purposes is not just an abstract declaration that such a use would protect minimum flows for reasons of environmental health. It is also a formal conferral of rights to the particular applicant to use the water resource for a certain period of time. Similarly, granting consent to a marine farm confers rights to occupy marine space, largely to the exclusion of others (particularly where the marine farm cannot be navigated through).

This presents few problems in a world where resources and space are abundant, in a world where private property rights exist in all resources, or in a world where resources are off limits for any exploitation. However, where resources are both scarce and public, choices have to be made as to how those are allocated. This is particularly important where environmental limits need to be imposed on the use of a resource, as this increases its effective scarcity. We need to keep in mind that renewable resources can still be scarce and finite resources.

The RMA was not designed to direct the allocation of resources in a proactive way. It was considered not to be a social or economic planning statute in this sense – only an environmental one. A conscious choice was made by its framers to allow the market, in most cases, to determine the specific use to which resources would be put, and by whom. The allocation of resources that are not privately owned has proved difficult. While some exceptions always existed for some resources to be managed on a more proactive basis outside the RMA, and further exceptions were put in place over time within the Act, the system remains one in which allocative choices are mainly decided by those who apply first. There is no public interest test or test based on the wisest or most sustainable use of resources. The allocative choices made by the market are then locked in for the duration of consent (or for longer when consents are effectively rolled over).

**Challenges in system design**

A system is not important only for producing tangible outcomes. It also contains structural, institutional and process features that can be positive or negative. These can produce uncertainty, inefficiency and normative misalignment.

First and foremost, the ideal of integrated resource management has not been fully realised. This is not to say that integration is always a good thing or without trade-offs, simply an observation that much of the system remains fragmented across multiple statutes, processes and institutions. Minerals, fisheries, climate, transport, hazardous substances, conservation land and forestry are some examples of topics that are at least partly managed outside the RMA. Specific Treaty settlement legislation also contains provisions relevant to the management of resources, and in some cases interacts with more general resource management legislation in different ways (the case of the Waikato River being a prime example). The legal personhood granted to Te Urewera and the Whanganui River are innovative and progressive measures, but have come about through

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20 These can be treated as adverse outcomes in their own right, but it is more appropriate to see them as causes of other adverse outcomes (health issues from poor quality or no housing, or from a lack of disposable income for healthy food and leisure, wasted time travelling in cars, etc).

21 For example, rights to prospect, explore and mine Crown minerals are allocated in a more structured way.

22 For example, tendering for rights to occupy coastal space targeted at the needs of the aquaculture sector.
specific settlement processes rather than general policy-driven changes to the RMA or conservation legislation. In more recent years, measures have been taken to circumvent normal RMA processes and protections by introducing bespoke legislation. For example, special housing areas were introduced in 2013 and it looks as if some form of urban development authority legislation will be progressed.\textsuperscript{23} Despite the conscious removal of institutional conflicts of interest in the reforms of the late 1980s, some internal conflicts remain within government. The Department of Conservation retains its advocacy mandate, but is susceptible to budgetary constraints in its practical ability to carry it out.

Secondly, there has been a proliferation of alternative processes under the RMA. For example, the latest amendments to the Act have introduced the streamlined planning process and collaborative planning process alongside the ordinary Schedule 1 process. National planning standards now exist alongside national environmental standards and national policy statements. Some of the defining features of the Act, as originally conceived, have been diluted through amendments (such as public participation, devolution and the Environment Court).

Thirdly, tensions continue to exist over the delicate balance a system needs to strike concerning various values. There is an ongoing and active debate about the role of Māori values and decision-making power in the wider system, and whether current arrangements go far enough. More generally, views diverge as to where to strike an appropriate balance between independence and accountability in decision-making. For example, it is entirely possible to view the rights of appeal to the Environment Court on planning matters as an affront to local democracy, but equally possible to see myopic or parochial planning decisions by under-resourced local authorities as a risk requiring independent expert oversight. As central government interest and intervention in Auckland issues shows, there is also substantial room for debate as to what the appropriate respective roles are for central, regional and local government in resource management matters.

Fourthly, the experience of compliance, monitoring and enforcement under the RMA has been mixed. Significant improvements are possible in this area.\textsuperscript{24}

Different challenges have different characters

From the perspective of the system and its historical context, it is useful to think of different groups of challenges according to their fundamental character.

First, some of the challenges discussed above are systemic in nature. They result from the fact that the current system does not do some things well, or does not do some things at all. Some of these things were a conscious decision (eg a choice largely to not address allocative issues under the RMA, and the separation of the legislative and institutional management of mineral depletion, fishing, and transport). Although it is by no means the only or even primary reason for poor urban outcomes, the RMA was not fundamentally designed to be a proactive planning regime for urban areas (although it has been used to do so in many senses). A changing social and biophysical context has exacerbated such issues or caused them to emerge (eg the increasing scarcity of water in parts of the country, and a period of sustained high urban growth in Auckland). The key question here is whether these kinds of challenges justify expanding or clarifying the basic role and ambition of the system and the way in which its parts interact.
Secondly, some challenges have arisen because of a gradual erosion of the simplicity and coherence of the original system. Issues have emerged over time, and have required (or resulted in) intervention. Justified or not, it has resulted in a series of ad hoc amendments to, or carve outs from, the core of the system (notably the RMA) without a coherent story to tie them together. It has produced multiple processes, confusing interrelationships and normative dislocation, as well as legislation that is long, cumbersome and user-unfriendly.

Thirdly, tensions will always exist between legitimate values. One person’s solution may be another person’s problem, and vice versa. For example, increasing the ability for the public to participate in decision-making processes may improve outcomes, but will inevitably increase the costs, complexity and time involved. Effects-based management allows decisions to respond to important contextual factors, but reduces predictability. At a more practical level, complaints about the system may reflect inevitable dissatisfaction with outcomes where there are inevitable trade-offs to be made. Resource management decisions often cannot be win-win. A person having to swallow a decision that is adverse for her or him may often consider there to be a problem with the system that produced it. That will not always be the case. For such challenges there is no quick fix. But the system still needs to revisit such tensions in a planned and constructive way as public values shift over time, and evaluate the need for change as it does.

Fourthly, the system has simply failed to deliver many things that it said it would. Most importantly, the RMA promised to set and uphold environmental bottom lines. As we have seen, it has not done so. Questions remain as to whether this is really an implementation failure (eg due to issues with capacity and capability, funding, a lack of national level involvement, enforcement and education) or whether it is the product of fundamentally defective formal structures – legislation and institutions.

Questions for discussion

• Are there any other key challenges currently facing New Zealand’s resource management system?

• Which challenges are the most serious or urgent?
5. WORLDVIEWS AND ETHICS
Introduction

This section begins an exploration of the normative components of the resource management system (what the system should be aiming for), which is the first step within the project’s conceptual framework. At this stage it does not go so far as to make concrete recommendations for change. It simply outlines approaches that can be taken.

As a society, we must decide on a coherent set of resource management aims we ought to pursue through our system of laws and institutions. We need to figure out what we want. While this might sound like common sense, such normative questions hide fiendish difficulties, and the answers to them are the bedrock on which any resource management system is constructed.

This exercise has two parts. The first is to consider the big picture ethical questions. These can be described loosely as our worldview or a normative theory. They are about the basic ways in which we see ourselves in relation to our surroundings and the natural world.

Secondly, we need to consider the principles that emerge from our worldview. Principles are not in themselves the answers to difficult questions of resource management. Yet they are useful guiding norms that nudge us in directions that are consistent with the ways in which we see the world. Principles are not, however, static. They can change in response to fundamental changes in our worldview, or in response to contextual changes even if our basic worldview remains the same. Sometimes entirely new principles can emerge in a short space of time. Due to historical difficulties in getting countries to agree to specific binding commitments, international law has been a particularly fruitful source of general principles, many of which have filtered down through domestic resource management systems like that of New Zealand.

The following discussion explores worldviews and principles in general terms, through a legal lens. We make passing observations on the extent to which the legal system we currently have implements or reflects them. However, we do not at this stage advocate for any particular ones, or offer an in depth exploration of the kinds of values New Zealanders currently hold. These are important tasks for future work, however.25

Worldviews

A normative legal theory, which can be described as expressing a particular worldview, is one that says what the law should be.26 Normative approaches to resource management are therefore linked to ethical discussions of what is right and wrong.27

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25 One valuable source for general information on values is the material produced by the World Values Survey: www.worldvaluessurvey.org
27 K Bosselmann, D Grinlinton and P Taylor (eds), Environmental law for a sustainable society, 2nd ed. (New Zealand Centre for Environmental Law, 2013) at vii.
This section first outlines some features that make the debate over environmental ethics especially difficult. It then considers broad categories of normative theories/worldviews, and some positive and negative features of each. Reference is made mainly to environmental ethics rather than resource management, as this is the way most debate has been couched in the literature.

**Difficulties with ethics in the environmental context**

The environment/resource management is a particularly tricky area of ethics. The planet has a finite carrying capacity that must at some point be reached. Both development and environmental health are thought of as ‘good’; so it makes sense that both underdevelopment and environmental degradation are thought of as ‘bad’. Yet one often must come at the expense of the other. This is different from an area like criminal ethics, where (despite arguments over definitions and exceptions) it is fairly simple to characterise crimes like murder as bad. There is no point at which too little murder becomes undesirable.

An ethic that seeks to pursue both unrestrained use and absolute protection of the environment is, obviously, unrealistic. History shows we cannot maximise both. There is simply no point at which too little murder becomes undesirable.

An ethic that seeks to pursue both unrestrained use and absolute protection of the environment is, obviously, unrealistic. History shows we cannot maximise both at the same time. It is therefore tempting to see the ethical question as answerable; that there can be no right and wrong. But it is more helpful to recognise that there is a range within which an ethically ‘right’ outcome can exist. Serious theories try to strike and defend a particular balance between resource use and environmental protection that exists between a social floor and an environmental ceiling.

Different theories provide different answers to this question. Some favour resource use, while others favour protection. All require the benefits and costs of use and protection to be weighed, but built into the weighing process are inevitably value judgements that some benefits and costs are more significant than others. For example, while no one would seriously claim that the leaching of chemicals into a river is morally praiseworthy in its own right, some may argue it is worth doing if it enhances a deprived community’s economic wellbeing.

We do not weigh values in a vacuum. In fact, the significance we place on an effect is determined not by the effect per se, but by the character of the person or thing affected. In other words, the question ‘what weight do we place on the various benefits and costs of this decision?’ can be rephrased as ‘what relative importance do we place on the persons or things for whom this decision has benefits and costs?’ For example, some may feel we need to prevent pollution in low socioeconomic areas where residents cannot afford healthcare. The key question is not generally whether a theory favours use or protection, but rather whose interests we value more.

Many different interest groups can be identified. It is useful to consider four ways in which we need to distribute the costs and benefits from resource management decisions. First, they must be distributed among people who are alive here and now. This is often seen as a distributional issue (when we allocate rights to use or possess resources) or one of environmental justice (when we distribute costs along racial or socioeconomic lines). Secondly, benefits and costs must be distributed between those alive today and future generations. This is a problem of intergenerational equity or intergenerational justice. Thirdly, we need to distribute benefits and costs between private persons and the wider notion of the ‘public’.

This public good is not simply produced by adding up New Zealanders’ private interests. Fourthly, we need to distribute benefits and costs between people and nature. This can be described as a matter of ecological justice.

Resource management decision-making becomes even trickier when we think about the nature of the questions being asked. Most significantly, environmental decisions are focused on what will happen in the future. Future events are inherently unknowable. Sometimes, we may ‘not know what we do not know’. How we approach risk and uncertainty is a big part of resource management decision-making. There may also be disagreement as to whether a consequence is actually a benefit or a cost, or neutral. Value judgements are widespread when it comes to the environment. Furthermore, despite popular discourse, decisions are not as simplistic as weighing the economic benefits of using resources against the environmental benefits of protecting them. Protecting native trees, for example, can generate long-term economic benefits from sustainable timber harvesting. And using forests for recreation and scientific study can protect the environment.

**Anthropocentrism and ecocentrism**

Ethical theories provide a moral basis for addressing these difficult features of environmental decision-making. They tell us whether it is right or wrong to value one interest group over another, or to what degree. They do not need to be formally recognised in a system to be significant. For example, the general concept of neoliberalism is not explicitly recognised in any New Zealand statute or regulation, yet it has a strong influence. Ethical theories

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29 See generally C Warnock and M Baker-Galloway, Focus on resource management law (LexisNexis, 2015) at 28.
31 K Bosselmann, ‘The concept of sustainable development’ in K Bosselmann, D Gelinlinton and P Taylor (eds), Environmental law for a sustainable society, 2nd ed. (New Zealand Centre for Environmental Law, 2013) at 106.
32 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 106.
33 See D Gelinlinton, ‘The context of environmental law’ in P Salmon and D Gelinlinton (eds), Environmental law in New Zealand (Thomson Reuters, 2015) at 37–42.
34 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 29.
35 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 106.
can be divided loosely into two camps (see Figure 8): those that are primarily anthropocentric (human-focused), and those that are primarily ecocentric (nature-focused). In fact, modern environmental ethics as a discipline has largely been a series of attacks and defences of the anthropocentric thought upon which Western society has developed (although there are much older approaches to environmental management that can be described loosely as ecocentric). Broader questions around the ethics of capitalism and socialism (and everything in between) can have implications for how we approach the environment. But while capitalism may often in practice encourage a fairly narrow, human-focused view of the environment, other models of political and social organisation do not necessarily do so any less. Thus it is more useful in this exercise to focus on theories that specifically concern the human relationship with the environment. These could, in principle, exist in societies irrespective of whether they are capitalist, socialist, feudal, tribal or anything else.

**Figure 8 Broad categories of environmental ethics**

Under the umbrella of anthropocentrism, it is useful to see a broad division between economic approaches (those that, generally speaking, focus on welfare and efficiency, and which seek to monetise the environment) and non-economic approaches (those that focus on a broader set of human values). Ecocentrism can also be split into a number of categories (eg approaches with spiritual or indigenous underpinnings, or those focused on animal rights). Many theories exist between strict economic approaches and strict ecocentric ones.

### Economic anthropocentrism

An anthropocentric approach to the environment means human interests are put at the centre of decisions about resource use and protection. People are held to be of overriding importance. Within this, an economic anthropocentric approach defines human interests relatively narrowly: the maximisation of social welfare.

In economic approaches, social welfare is generally seen as a product of two things: efficiency and equity. An efficient allocation of resources means there is no way to increase one person’s welfare without reducing another person’s welfare. Some have proposed that net increases in welfare can still be efficient if those benefitting can use their gains to compensate those suffering loss.

But because many outcomes can be efficient, economic approaches generally determine which one is optimal by choosing the most equitable. Some may effectively see equity as unimportant (any efficient allocation is acceptable), but others may require that the welfare of those with the lowest welfare be enhanced.

In the environmental context, the most famous (or infamous) expression of an economic approach is that attributed to Ronald Coase, in what has since become known as the Coase theorem. This echoes Hardin’s seminal work on the tragedy of the commons, in that environmental problems are the result of market failures.

In other words, if the negative impacts of a person’s resource use can be shared between many people, but its benefits can be individualised, any person acting rationally (in an economic sense) will cause overall environmental harm. Different solutions to this problem have suggested: public regulation is one, taxation is another. Those writing in the tradition of the Coase theorem have proposed greater enclosure of resources – in other words, the allocation of...
defined, divisible and defendable property rights. People will look after their own resources from which they benefit personally, and the profits they make use can be used to compensate those who are harmed by it.

Strict economic approaches like this can be criticised. First, they do not allow the possibility that equity may be better enhanced by an economically inefficient outcome. In some cases, equity may need to be an overriding factor. Secondly, they assume the existence of markets with no externalities or transaction costs, and of economically rational actors. We almost always have less than perfect knowledge of the environmental effects of an activity, and markets may fail to internalise what are later realised to be the actual environmental costs of activities. Such approaches to the environment therefore do not reflect many real-world settings. Also, the enforcement of property rights generally occurs only once harm has occurred – it is the ambulance at the bottom of the cliff – yet some costs may be irreversible and in a sense ‘priceless’. This may be especially so for future generations who will bear the cost but cannot participate in the market.

Furthermore, it would be a mistake to think that all human values can be reduced to transactional or monetary terms. The natural world has characteristics and ownership attributes that are fundamentally different to other economic inputs like capital and labour. It cannot be moulded in the same ways. Should the environment really be commoditised – essentially reduced to a form of property? Impacts of resource use on neighbouring businesses may be easily quantifiable, but what of activities that undermine broader social and cultural relationships with the natural world? Or activities that threaten the intrinsic or existence value of the natural world rather than its instrumental value? These tend to be dismissed by traditional economic analyses as too difficult. There may be a seductive simplicity about measuring wellbeing in terms of economic metrics like gross domestic product (GDP), but in more recent times environmental economists have begun to question whether other metrics need to be given a more prominent role in measuring human progress, despite the clear difficulties in doing so.

Overall, we can question whether social welfare is an appropriate measure by which to gauge the ethics of human activities impacting on the environment. International law scholar Eli Louka has observed that ‘free markets may have triumphed as the economic system of the twenty-first century but have failed to capture the hearts and minds of people who crave for social justice’.

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50 See, for example, the description of property rights in M Bramley and J McNeill, ‘Up the creek and down the river: In-stream ecological values and property rights under the RMA’, in K Bosselmann and V Tava (eds), Water rights and sustainability (New Zealand Centre for Environmental Law, 2011) at 175.
52 A limitation that Coase recognised explicitly.
54 Again, recognised by Coase himself.
56 See generally J Gowdy, Coevolutionary economics: The economy, society and the environment (Kluwer, 1999).
58 See R L Revesz, Foundations of environmental law and policy (Oxford University Press, 1997) at 3.
One could usefully add ‘environmental justice’ – history has shown that focusing on defending private rights does not produce sustainable outcomes for the environment as a whole.60

Of course, it would be unfair to paint all self-described environmental economists with the same brush. Not all the critiques above would apply to theorists simply because they use some kind economic lens, and they are intended rather as a comment on just one extreme end of a wide spectrum of worldviews. In recent times, much innovative thinking has occurred in the field of environmental economics. The division between economists and ecocentrists has also blurred, with many quite different framings now available for concepts like natural capital, ecosystem valuing, discounting, and green trading. Some can be described as ecological economists rather than environmental economists, who recognise that the natural world has intrinsic value as well as its instrumental value as a source of resources.61 However, a defining feature of even the most green approach to environmental economics is the methodological tendency to reduce the natural world to monetary terms, even if the end goal is broader than efficiency or an increase in human welfare. This is not to say that monetary terms, even if the end goal is broader than efficiency or an increase in human welfare. This is not to imply that such an approach is bad, simply to identify that it is one lens among many through which people may view the world and think about what is right and wrong.

Non-economic anthropocentrism

Some scholars of environmental ethics have rejected economic approaches. They have retained a focus on human interests – an anthropocentric way of looking at things – but have looked more widely at human values.62 They have considered that what is in the public interest may not be as simple as combining the interests of private consumers. What we want as economic actors is not necessarily who we are as citizens of a society.63 The natural world cannot be valued only by measuring people’s willingness to pay.64 This kind of view gives weight to the interests of future generations, but stops short of recognising that nature has interests or a voice separate from the value that humans see in it.

The methods used by these more inclusive takes on anthropocentrism are broader than those of strict economic approaches.65 Cost-benefit analyses are rejected as the absolute measure of ethics. People are recognised as social, cultural, political and moral agents as well as economically rational and self-interested actors. Valuing the environment is not assumed to bring with it a wish to possess it in an economic sense, and market failure is not taken to be the sole basis of social regulation.66 Environmental issues involving other life forms and future generations pose ethical aims beyond the maximisation of resource consumption, no matter how sustainable that consumption may be.

The implication here is that many competing values must be weighed (not just a single value like social welfare).67 But embracing the chaos of conflicting human values means that it is extremely important to get the process of decision-making right. Therefore this kind of approach generally stresses the importance of participation, transparency, and rational discourse leading to decisions.68 Environmental decision-making is about deliberate democracy and an informed and engaged population. It also recognises that values may change over time through ongoing community conversations, not just through the operation of a market or inflexible economic principles.

Some anthropocentric scholars have also advocated for ‘environmental human rights’, such as the right to clean water, or a healthy environment more generally. However, others have warned that this has risks: it can lead to a dilution of sustainability, a justification for development, and an individual and property-focused ‘anthropocentric reductionism’.69 In other words, it can be dangerous and unrealistic to assume even a general right to a healthy environment if this is not accompanied by related environmental obligations and duties.70

It is also possible to criticise anthropocentrism more generally. For one, the same basic criticism of economic approaches can be made. While the environment may not be commoditised, it is still seen as a concept serving human interests and measured by human values. Weighing such a large number of conflicting values can cause uncertainty, subjectivity and argument. One New Zealand judicial decision has likened the act of weighing environmental effects as ‘comparing apples and oranges’.71 The approach can mean all things to all people and lack durability.

Ecocentrism

Ecocentric theories of environmental ethics are often described as ‘deep ecology’. In general terms, ecocentric approaches see the central environmental issue as the allocation of value between human interests and the interests of nature. Nature is conceived of as a separate

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60 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 16.
61 See, for example, S Shmelev, Ecological economics: Sustainability in practice (Springer, 2012).
64 See M Christensen, ‘Valuation of natural assets under the Resource Management Act’ (2013) 17 NZJEL 291 at 315.
65 Some people may choose to describe broader anthropocentric approaches (which recognise a non-monetary public interest) as ‘economic’ in the sense that such interests are still assigned value through deliberative and participatory processes. See, for example, M Christensen, ‘Valuation of natural assets under the Resource Management Act’ (2013) 17 NZJEL 291 at 318. The terms ‘economic’ and ‘non-economic’ are simply useful labels to recognise two ends of a complex spectrum of theories.
68 See K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 49; R Eickerlesby, The green state: Rethinking democracy and sovereignty (MIT Press, 2014) at 141.
69 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 6, 11, 114. A human right concerning the environment can be found in art. 1 of the Stockholm Declaration, which declares a right that humans have to adequate conditions of life in an environment of a quality that permits a life of dignity and wellbeing.
70 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 127.
71 JF Investments Ltd v Queenstown Lakes District Council EnVc Christchurch C48/06, 27 April 2008 at [37].
entity, with interests or rights that should be separately recognised and defended. Humans are not seen as inherently superior beings. The environment is not there to serve humans; humans are simply part of a complex web of natural relationships that need to be respected. The natural world is not just a collection of resources having instrumental value.

Environmental justice, concerned with the distribution of environmental harm among people, is extended to ecological justice, which is focused on the rights of non-human living beings. Some have suggested that traditionally anthropocentric concepts (such as justice) can be useful starting points for ecocentrism. For example, we could include the natural world as an actor within, not outside, the human community of justice. The idea of a regenerative, rather than a linear (or even circular) economy, is a potentially powerful ecocentric model. Ecocentrism does not reject economics, but through the concept of ecological economics it is seen more as one of many tools for achieving ethically defensible outcomes than a framework of thought in its own right.

Within ecocentrism are different perspectives on the scope of nature, and on the best balance to strike between the interests of people and the environment. Two main subcategories are most useful. First, biocentric theories focus on the dignity and rights of the living world. Some animal rights theorists see the ability to feel physical or psychological pain as reflecting intrinsic value. Others have emphasised the wider value of individual plants and animals as centres of life capable of having some idea of their own good. Secondly, broader nature-focused approaches extend rights and dignity to non-living aspects of the natural world, such as long-standing geological or geographical features, or landscapes. Some versions of ecocentrism can look radical, but few demand that people abandon all activities that exploit the natural world. To do so would be inconsistent with our own moral rights as part of an ecological community.

Ecocentrism should be applauded for seeking to shift the balance of environmental management towards true sustainability. But strict brands of ecocentrism can be criticised when accepted absolutely. For one, they provide little explanatory power beyond that of an anthropocentric

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73 See K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 79.

74 See K Ott, 'Solving the demarcation problem' in L Westra, K Bosselmann and R Westra (eds), Reconciling human existence and ecological integrity (Earthscan, 2008).

75 See P Singer, Animal liberation (Random House, 2015).


approach. No matter how it is presented, ecocentrism in practice must reflect human values concerning respect for nature, rather than the values of nature itself. Limitations to resource use are imposed by humans on humans. Plants can’t speak. The ability to pursue life and reproduce may be objectively identifiable as essential interests of all living things, but other effects are not as clear cut. This is particularly so where people defend the rights of inanimate natural objects, which are incapable of having objective ‘interests’ in any meaningful sense. As Louka has observed, ‘Only by attaching values – a human artifact – can the course of action be determined that is appropriate for the protection of the environment and human health.’ Some theories that can be classified as ecocentric embrace this fact; while humans are the only true moral actors, they nevertheless should confer high intrinsic value on aspects of the natural world. Sometimes the difference between anthropocentrism and ecocentrism can be one of degree. Not all theories actively proclaim themselves as one or the other.

More practically, strict ecocentric approaches may not be politically realistic as an ethic on which developed societies could currently frame their laws. For example, the consumption of meat is not essential to human survival, yet it is highly unlikely that this could be restricted in practice. One scholar has pointed out that ‘we must chaste our goals by adjusting them to economic, legal, scientific, and political realities.’ Perhaps such theories are more practically useful to impose an entirely new ethic, but rather to act as a moral push towards better environmental outcomes.

Particular mention must be made, at this point, of the Māori worldview in relation to the environment. This is not addressed specifically in this section (which is concerned with environmental ethics at a more general and theoretical level). Subsequent work will focus on it. However, it should be noted that, in practice, the Māori worldview is more closely aligned to Western notions of ecocentrism than it is to anthropocentrism. Māori values are intertwined with intangible or spiritual relationships (whanauanga) with the environment, which have been described as an intricate and interconnected web with foundations in a complex cosmology of familial and celestial relationships. The environment is not seen as a collection of resources to exploit for human benefit, nor as a separate entity to protect; rather, people are seen as part of a cosmological system based on kinship, respect and reciprocity.

Evaluating worldviews

While criticisms can be made of each, no one ethical theory can be said to be ‘correct’. That is the unfortunate nature of ethics. Ultimately, one must come to a personal conclusion as to what a society should be aiming for through its resource management system. Across society, those aims usually do not emerge from a consensus, but rather from a continually repeating and evolving conversation that recognises unavoidable tensions. A system in which significant parts of the population cannot see their own worldviews reflected is unlikely to be durable. At the same time, a system that contains a jumble of inconsistent ethics is one likely to generate conflict, uncertainty and inefficiency.

Two more concrete thoughts may be ventured at this stage. First, New Zealand’s historical and cultural context demands that recognition be given to the Māori worldview. The system cannot be constructed on a normative blank slate in this regard. Secondly, whether through failures of implementation or something more intrinsic, a largely Western, neoliberal and anthropocentric ethic has failed to achieve the kinds of outcomes we want. That does not mean we need to reject the ethic entirely, or replace it, but it does mean that we should be aware that such a worldview is a choice, not a natural order. It also means that we should be open to more ecocentric ideas if they can orient our outlook in a way that is more likely to get us to where we want to go.

In this sense, we can consciously construct a different worldview as a tool to force change in the system. Indeed, this is likely to be necessary; we cannot expect an ethic to generate spontaneously over a timeframe of years when comparable sea changes around concepts like justice, property and human rights have taken centuries. Acceptance requires a change in hearts and minds, which takes time. But ethical change does not have to happen all at once. We are already seeing gradual and incremental change in New Zealand’s predominantly Western system, with its increasing inclusion of Māori values and concepts. Ethical change can also be a transformative process, through which existing concepts are recast in different terms until they may no longer be recognisable as the originals (eg the legal personhood conferred on Te Urewera may be the beginning of such a process).

We can even adopt an ethic despite it having components many do not truly believe in. For example, it is possible to confer legal personhood on a forest, not because people think trees are animated by spirits, but because they recognise it as a more effective way of achieving a desirable outcome – the protection of forests within adversarial legal structures. In a similar way, we have chosen to confer legal personhood on companies through a legal fiction, because we anticipated that such a measure would produce desirable economic outcomes. We do not have to accept that a snail is capable of having subjective desires in order to adopt an ethic whereby the independent
interests of living creatures are constructed, valued and defended – if that were a more promising pathway to avoiding catastrophic biodiversity loss. While potential conflicts would have to be carefully worked through, an ethic with a stronger ecocentric element is likely to have greater synergies with Māori worldviews. In fact, Māori worldviews – which are familiar to many New Zealanders – may prove to be an immensely valuable way to facilitate transformational and acceptable ethical change rather than reluctant and abrupt ethical change, or none at all. The beauty of worldviews is that they are amazingly malleable and adaptive. It is within our power to mould them in a more active way if we wish. We need to take care to be realistic, but not shy away from being ambitious.

The discussion above highlights the existence of a complex feedback relationship between our aims and our ethics. An ethic can shape our aims (eg neoliberal individualism naturally produces a desire to protect individual human rights), but equally our aims can shape our ethics (eg a realisation that we value our disappearing biodiversity could precipitate a shift to ecocentrism). In other words, ethics can be norms (a statement of what is morally right to do) or tools (a way to achieve aims that have been generated elsewhere). In reality they are both. The latter can even become the former if people come genuinely to believe in it over time, which may prove to be very important. A resource management system will have durability only if supported by strong cultural norms. And, ultimately, we must be aware that the ethic we move towards today is as much, if not more, for our children than for ourselves. What do we want them to believe in?

The presentation of the conceptual framework of this project has begun with a discussion of ethical approaches because any discussion of the system must rest upon a firm normative foundation. But it also recognises that our choice of ethic is not arbitrary or random; it can be influenced by aims that are generated spontaneously through society’s reaction to significant social, economic and biophysical change.

One final observation may be ventured about the kind of worldview embodied in the current New Zealand resource management system. While some of its provisions reflect strong ecocentric assumptions and ambitions, these exist alongside more traditional instrumental concepts of resource management. In some senses, ethics historically held by New Zealanders can be seen as both ecocentric and economic. For example, the affinity we feel with the health of our productive land is not just about its economic value. It is a part of our national identity (although urbanisation is arguably seeing this change).

But ecocentrism does not (and arguably cannot) guide the normative direction of the non-natural and non-living parts of our system (eg cultural landscapes, heritage management and aspects of urban planning). References to intrinsic values have, in fact, been avoided entirely in the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act).

At the same time, purely economic approaches fail to explain the content of New Zealand’s existing law, which goes further than simply remedying market failures or providing for methods of economic valuation. For example, the RMA (and many other Acts) are filled with wider public values, not just the mechanical outcomes of economic analyses. Legislation concerning conservation lands assumes that the public interest in protection of some areas should be absolute and, in a sense, priceless. The law accepts that there is a public interest in how private land is used; landowners cannot do as they please. Moreover, the origins of the RMA can be traced back to concerns with the wellbeing of future generations, arising from international events that illustrated the fragility and scarcity of natural resources.

The RMA has been described as ‘a complex set of values enshrined in law’. This is also an accurate description of the current resource management system as a whole. Within it, ‘economic values co-mingle with ecocentric values’. But despite recognition of the importance of the free market, the intrinsic values of the environment, and Māori values, looming large over both is a strong and usually overriding focus on the public interest. The normative challenge for system reform is to determine to what extent this delicate and complex melting pot of worldviews needs to change.

We must also not forget that the practical challenge is even more important – to translate a shift in worldviews into tangible changes. It is not enough to say we have a different ethic. Ethics must make an actual difference on the ground to be worth having, or changing. They must flow down from the lofty heights of philosophy through our principles, our system design, our decision-making process, and the ways in which we live our lives. Ultimately their worth must be measured by the behaviour change and outcomes they produce.

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85 The tension around protection of the proposed Kermadec Islands Sanctuary highlights the care that has to be taken.
86 For example, the existence of the Animal Welfare Act 1999 demonstrates an acceptance that cruelty to animals is morally wrong, irrespective of any effects on humans.
87 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 19, 105.
89 See D Young, Values as law: The history and efficacy of the Resource Management Act (Victoria University of Wellington Institute of Policy Studies, 2001), at vi.
90 For example, the oil shock of the 1970s and the scathing OECD audit of New Zealand’s environmental arrangements in 1980. See D Young, Values as law: The history and efficacy of the Resource Management Act (Victoria University of Wellington Institute of Policy Studies, 2001) at 3–5.
91 D Young, Values as law: The history and efficacy of the Resource Management Act (Victoria University of Wellington Institute of Policy Studies, 2001) at 85.
6. PRINCIPLES
Introduction

A society’s basic worldview, as embodied in environmental and social ethics, provides the normative foundation of its resource management system. But it is not overly useful to rely directly on such general ethics when constructing a system that must work in practice. For example, simply referring to the need to recognise the dignity of animal life does not help us determine the acceptable level of risk to biodiversity from urban development. It is important to operationalise our worldview through the recognition or development of more detailed principles – ideas like sustainability and precaution. Principles are not always visible on the face of legislation or spelt out in judicial decisions. They often lie more subtly behind the reasoning of law-makers and judges. Depending on their level of recognition in laws, some can be characterised as legal principles while others are only of an ethical nature. For present purposes, that is an unnecessary distinction to make. They both have potential to be norms in a future system, whether legal or not.

This section considers key principles that have been developed in the field of resource management. These include international legal principles relating to the environment; domestic principles observable in New Zealand; principles that may not have a label but are nonetheless readily observable in the way laws or institutions operate; and principles that are emerging in the literature or in practice.93 While it is intended to be a descriptive rather than a critical account, some comment is made as to if, or how, the principles have been applied in the current system. The following is a summary of the key features of the principles identified. The principles are then discussed individually in more detail.

1. **The principle of sustainability** provides a framework within which other more detailed substantive principles can be applied. It is essentially about balancing the value of resource use with the value of environmental protection. Sustainable development is concerned not only with environmental protection, but also with rights to socioeconomic development. Sustainable management, in the New Zealand experience of the term, has a narrower focus of protecting the environment. It seeks only to enable socioeconomic wellbeing.

2. **The principle of environmental justice and distributional equity** seeks to distribute the costs and benefits of resource use and protection between groups in present-day society according to equity or sensitivity to harm.

3. **The principle of intergenerational equity** seeks to distribute costs and benefits of resource use and protection between present and future generations, so that at least the basic needs of future generations are met.

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93 General acknowledgement is made of G Severinsen, The environmental regulation of marine carbon capture and storage in New Zealand (PhD thesis, Victoria University of Wellington, 2017), parts of which this section draws from with the permission of the author.
4. **The principle of polluter/user-pays** seeks to distribute the costs of resource use between private and public interests. It generally places costs on the polluter or user.

5. **The principle of common but differentiated responsibility** seeks to distribute the costs of environmental protection among the international community. It means that New Zealand bears greater responsibility for the costs of mitigating climate change than some other countries.

6. **The principle of subsidiarity** seeks to distribute the benefits and costs of resource use and environmental protection according to the values of the relevant community of interest. Decisions are made closest to the communities of interest most affected.

7. **The principles of the Treaty of Waitangi** include active protection, good faith, remediation of past grievances, and informed decision-making. In the resource management context, the central idea is often kaitiakitanga (loosely translatable as 'stewardship'), but other important concepts are mauri (life force or essence) and mātauranga Māori (knowledge and ways of knowing).

8. **The public-interest use principle** is a convenient label for a principle that recognises that the resource management system should place value on, and incentivise or mandate, some resource uses that are in the public interest.

9. **The conservation principle** recognises that protection and enhancement of the environment must be relatively absolute in some geographical areas. It encompasses the principle of non-regression, which states that measures beneficial for the environment should not subsequently be removed or eroded, and the public trust doctrine, under which the state acts as trustee of the ecological health of public areas.

10. **The precautionary principle** states that where there is uncertainty as to the adverse effects of an activity, this is not a reason to fail to take action to address them. It includes approaches to risk identification, risk assessment, and risk management.

11. **The participatory principle** provides that the public have a legitimate interest in being involved in decisions about resources and the environment that impact on them or are of significant public interest. Such rights are not absolute. They must be balanced against the need for efficiency and timely decision-making. Māori should have relatively strong participatory rights because of their status as Treaty partners. Access to information, transparency of process, and access to justice are also important.

12. **The principle of efficiency** is important in resource management. In terms of process, decisions should be streamlined and use comparable units of measurement wherever possible, but must be balanced against the need for good information, public participation, and the evaluation of values, not just monetary units.

### The sustainability principle

Sustainability is one of the most widely deployed, and accepted, overarching framework principles in resource management around the world. It is a framework principle in the sense that it sets the broad playing field within which other, more specific, principles operate. In the last few decades, despite some recent challenges by equally general concepts like resilience, sustainability has become a byword for responsible environmental management.94

However, sustainability can mean many things. At its most basic, ‘to sustain something’ simply means that it endures into the future, and this can refer to social or economic sustainability as much as environmental sustainability. Internationally, the most common formulation has been *sustainable development*, meaning ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’.95 The principle’s focus on rights to socioeconomic development, and the largely neoliberal international environment in which it has been developed, have meant that it has tended to be approached in fairly anthropocentric terms. It has also generally focused on the reduction or prevention of harm, not the need to regenerate already degraded components of the environment.

New Zealand’s environmental statutes define sustainability in different ways.96 However, most discussion has focused on the term ‘sustainable management’ which is the key normative basis for decision-making under the RMA and the EEZ Act.97

Arguably this term, as well as international conceptions of sustainable development, simply recognise the need for environmental law to strike some balance between resource use and protection.98 This does not mean sustainability always allows the environment to be traded off against social and economic concerns (much depends on how it is defined) but simply that it never aims for absolute protection from use or the removal of all protections. Sustainability generally sets out various potentially conflicting matters that need to be addressed through the operation of subordinate principles.99 It is not in itself an operative norm.100 Some have seen it more as a

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96 For example, see Fisheries Act 1996, s 10; Local Government Act 2002, s 14(1)(h).

97 *RMA*, s 6; *EEZ Act* s 10; see also Reith v Ashburton District Council [1994] NZRMA 241 (PT).


buzzword than a principle, and as ‘pushing and pulling the boundaries of true primary norms’. It is an agile concept; its real meaning can change as values within society shift and as biophysical realities change. It generally allows adaptive responses.

Sustainable management has, for most of its history in New Zealand, involved a relatively vague balancing of conflicting interests (an overall broad judgement) rather than the clear imposition of ecological bottom lines, although this has recently begun to change (and it not an inherent feature of sustainability as a broader concept). Since 2014, sustainable management under the RMA enables, even if it seldom demands, the imposition of bottom lines beyond which the health of the environment cannot be traded off against other aims.

The scope of sustainability is wide in New Zealand. It is concerned with impacts on both private property and public values (although it also recognises that the public interest in environmental protection can override narrow private rights). It encompasses almost all effects of activities on a broadly defined environment – which under the RMA, at least, includes the social, economic and cultural condition of communities.

With the idea of sustainable development expressed in Principle 4 of the Rio Declaration on Environment and Development (1992), sustainable management recognises that environmental protection cannot be considered in isolation from social and economic development. Integration has not been fully realised. However, we can observe an intention to achieve integrated management as far as practicable. For example, management at the catchment level is important, as is considering the built and natural environments as part of one connected whole.

The principle of sustainability is a useful framing device, but it is not precise enough to resolve the tensions inherent in environmental laws. Other principles must guide more specifically how we assign weight to various interests when making environmental decisions. They need to tell us not only which, but also whose, interests are to be valued more or less. Weight must be assigned between the interests of groups within present-day society, between present and future generations, and between public and private interests.

The purpose of environmental justice is to protect some groups more than others from the costs or risks of resource uses. Those groups are usually those who are disadvantaged socio-economically. Distributional equity (sometimes referred to as intragenerational equity) is about making sure that the benefit of resource use rights are distributed in an equitable way. Neither concept is about protecting the environment per se, only about the ways in which the costs and benefits arising from use are distributed among people. They can be thought of as the social dimension of sustainability. An ecocentric addition to the principle of environmental justice is ecological justice, in which the natural world is accepted as a participant in the community of justice.

Within New Zealand’s environmental law the concept of distributional equity has been fairly weak. Under the RMA, the market, not equity or justice, is the primary driver for how and by whom most resources are used. The concept of sustainable development promoted in the Brundtland Report was intentionally avoided in the RMA due to its association with the distribution of wealth and rights to socioeconomic development. The RMA does not, for example, seek to allocate property rights. As a consequence, most resources are allocated on a first-in-time basis through consenting processes that do not usually consider opportunity cost. The focus is not on planning for public benefits, but rather on the acceptability of adverse effects arising directly from an activity. It is assumed that the market will provide efficient allocative choices. As the Minister for the Environment said on the Resource Management Bill’s second reading, as long as adverse effects are acceptable, ‘what people get up to is their own affair’. Recently, the courts have begun to

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**Question for discussion**

- Is sustainability still a worthwhile umbrella principle for the resource management system to meet the challenges of the 21st century? If so, which form should it take?

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**The principles of environmental justice and distributional equity**

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question the wisdom of this approach, and the RMA (and other legislation) now have the ability to allocate specific resources in more structured ways. But, overall, allocative questions have not been fully incorporated into law designed to protect the biophysical environment. Questions of social and economic equity still belong mainly outside the resource management system.

New Zealand’s take on environmental justice is also fairly weak. Although effects on the environment include effects mainly outside the resource management system, social, economic and cultural wellbeing of people and communities, the law does not specifically require that certain socioeconomic groups be insulated from adverse effects more than others. That said, impacts on Māori cultural interests are more strongly safeguarded. Effects on vulnerable communities may be valued particularly negatively in practice, and treated as being of greater magnitude. It is hard to discern a meaningful ecoscentric expression of ecological justice, although arguably the initial stirrings of this principle can be seen in the recent conferral of legal personhood on Te Urewera and the Whanganui River.

Question for discussion

- Should New Zealand’s resource management system place more emphasis on the principles of environmental justice and distributional equity? What about ecological justice?

The principle of intergenerational equity

The principle of intergenerational equity is about the relative value we give to the interests of current and future generations. It tells us that the latter should be safeguarded to at least some extent. It is a morally charged obligation to future generations to act prudently; a direction not to consider cumulative, long-term effects as inconsequential, and an exhortation to live off the dividends of, rather than erode, our natural capital. It requires the institutionalisation of long-term thinking and the imposition of appropriate planning horizons, including the provision of adequate information and predictive or at least strategic models. Edith Brown Weiss has identified three key components in this concept: conserving the diversity of our resource base; maintaining the quality of our planet; and providing equitable access to our legacy. The market alone cannot be relied upon to provide for the interests of future generations, because its participants may not act in the interests of those who are not yet born. The principle is generally approached in an anthropocentric way, on the assumption that preserving the ability of future humans to meet their needs will also benefit the natural world. However, the concept of providing for future generations can also be observed within the more spiritually-focused approach in Te Ao Māori.

New Zealand’s existing system stops short of providing equal weight to the interests of future generations. The RMA, for example, directs decision-makers to ensure that the reasonably foreseeable needs of future generations are met. It does not require that we confer on future generations the same ability to provide for their wellbeing as present generations. As in international law, the needs of future generations is an amorphous concept and extremely hard to predict. However, a central concern of the law is that future generations will get to enjoy the essential biophysical components of the environment needed for life. When making plans, the idea of ‘the future’ is to be determined according to the nature of the threat. Environmental damage that is severe, long-term, and irreversible is to be given significant weight.

The polluter-pays principle

The polluter-pays principle states that the costs of pollution should be internalised to those who produce it (or are ultimately responsible for its production), or to those who enjoy its benefits. The broader concept of user-pays is equally useful, since pollution is simply one example of using a resource (a receiving environment).

121 For example, RMA, pt 7A, ss 14(3), 30(1)(fa) (fb); CMA, s 24; Fisheries Act 1996, pt 4.
122 S Beder, ‘Cooling the Earth’ [2000] 4 NZJEL 227 at 236.
123 For example, see RMA, ss 85A, 104(1)(c)(iv).
125 K Palmer, ‘Origins and guiding ideas of environmental law’, in K Bosselmann, D Girling and P Taylor (eds), Environmental law for a sustainable society, 2nd ed. (New Zealand Centre for Environmental Law, 2013) at 16; RMA, s 51(2)(a); Conservation Act 1987, ss 2, 6(c); Local Government Act 2002, s 14(1)(ii)(ii).
128 K Bosselmann, The principle of sustainability: Transforming law and governance (Ashtgate, 2008) at 34.
130 RMA, s 51(2)(a).
133 Canterbury Regional Council v Christchurch City Council (EnvC) Christchurch C217/2001 6 December 2001 at [18].
The principle of common but differentiated responsibilities

The principle of common but differentiated responsibilities can be seen as a particular example of the polluter-pays principle. This is prominent in, but not limited to, the climate change context. It states that while all states have common responsibility for global environmental problems, it would be wrong or inequitable to require the same level of response given the different historical contributions of states to the problem and varying capacities to respond. Because it is a developed state, New Zealand has recognised that it should shoulder a heavier burden in mitigating climate change than countries in the developing world.

Question for discussion

- Do we need to move towards a stronger principle of user-pays (including charging users for resources and environmental impacts) or even beneficiary-pays (those who benefit should be charged)?

The subsidiarity principle

The principle of subsidiarity is concerned with the question of who makes decisions. Resource management decisions can be made by a variety of institutions at a variety of levels of governance. Subsidiarity provides that decisions should be made closest to, and in line with the values of, those most affected by them (the relevant community of interest). It can be difficult to determine where the appropriate level of decision-making is, because many communities have legitimate and conflicting interests. A decision (authorising a wind farm) can affect national interests (a positive impact on energy supply) in very different ways to local interests (visual amenity impacts or noise pollution). In New Zealand (relative to some European countries in particular), the idea of subsidiarity has tended to produce highly devolved decision-making by local government because positive and adverse impacts of most resource uses (and protection) have been felt locally and regionally, and because central government has taken a fairly passive approach to resource management.

The true costs of resource use are generally not internalised fully in the way New Zealand currently applies the polluter-pays principle. For example, compensation does not have to be paid for a failure to avoid, remedy or mitigate the wider adverse effects of an activity on the environment or persons. Degrading one aspect of the environment while enhancing another can be acceptable, as can be seen in the context of environmental offsets or environmental compensation (although these mechanisms are carefully controlled). The environment can sometimes be degraded in the interests of other nationally important agendas. The law also does not require that charges be imposed for the use of public resources. A low price on carbon emissions under the emissions trading scheme, in reality, transfers a large part of the costs of climate change from emitters to society as a whole. Ultimately, pragmatism wins out; the public interest in facilitating the private exploitation of resources is seen as more important than the complete internalisation of the costs of doing so.

136 See Rio Declaration, principle 16.
137 See generally C Warnock, ‘Global atmospheric pollution: Climate change and ozone’ in P Salmon and D Grinlinton (eds), Environmental law in New Zealand (Thomson Reuters, 2015) at 808-809.
138 For example, see RMA, ss 104 104D, 87A(6); contrast Climate Change Response Act 2002 (CCRA), s 63.
139 See Auckland Regional Council v Auckland City Council [1997] NZRMA 205 (EnvC), at 61.
140 See RMA, s 108.
141 Royal Forest and Bird Protection Society v Buller District Council [2013] NZHC 1346, [2013] NZRMA 293.
142 New Zealand Rail v Marlborough District Council [1994] NZRMA 70 (HC) at 86.
143 I. Leeserdyne, ‘Free for all or user pays?’ (2008) 12 NZIEL 65.
145 See K Bosselman, The principle of sustainability: Transforming law and governance (Ashgate, 2008) at 59-60.
146 See, for example, United Nations Framework Convention on Climate Change 1771 UNTS 107 (signed 9 May 1992, entered into force 21 March 1994) (UNFCCC), art 3.1.
147 See generally, D Shelton, ‘Using law and equity for the poor and the environment’ in Y Le Bouïthiller et al (eds), Poverty alleviation and environmental law (Edward Elgar, 2012). Because it is about assigning responsibility based on historical contributions and the capability to respond, it can also be seen as an international expression of the principle of distributional or intergenerational equity.
149 Compare A Young, ‘Climate change’, in D Nolan (ed), Environmental and resource management law, 5th ed. (LexisNexis, 2015) at 1150.
150 See RMA, ss 59-77; B Gussen, ‘Subsidiarity as a constitutional principle in New Zealand’ (2014) 12 NZJPL 123.
However, the current system does provide for this default position to shift if national interests emerge or become more prominent.  

Local, regional and national actors can bring with them different values and varying degrees of independence. So can political, judicial and technical actors. Tensions between central and local, and between independent and accountable, are equally important. Different kinds of decision-makers can be used in different contexts, leveraging off their respective attributes while mitigating their risks. For example, political decision-making is capable of distorting facts and playing on fears more than scientific or judicial decision-making. There is a risk that politicians fail to ‘deliberate about … interests’ and respond ‘mechanically to constituent pressures’. Yet, on the other hand, scientists and judges have no particular moral claim to tell us what we should do, and are less accountable to communities for their choices. History has shown us that there can be a vast chasm between scientific rationality and environmental wisdom. Reliance on judicial mechanisms can also have implications for the nature of processes within the system (e.g. how adversarial or inquisitorial, and how expert-driven, processes of decision-making are). The capacity and capability of decision-makers are crucial considerations when deciding by whom decisions should be made.

In the current New Zealand system there is no dogmatic adherence to democratic, scientific or judicial processes, nor complete reliance on local, regional or national decision-makers. Overall, broadly applicable rules/regulations and policies tend to be informed by democratically determined values (i.e. decided by elected and accountable politicians). This recognises that the development of norms, in instruments like regional or district plans, is ultimately an expression of community values rather than expert assessment. As Eli Louka has observed, ‘most decisions on environmental matters have to be made based on political considerations’.

Decisions are generally devolved to those representing the relevant community of interest (be it local, regional or national). Thus, legislation under which normative matters are decided centrally, such as the EEZ Act and Climate Change Response Act 2002, can be explained as addressing a national (or global) community of interest in oceans and the climate. The RMA, which addresses a wider range of environmental issues, provides for political decision-making power at the planning level to shift as the relevant community of interest changes. The Act contains a statutory presumption in favour of devolved decision-making at first instance (district and regional councils are tasked with producing plans), but the power to determine communities of interest ultimately resides with central government. It can choose to promulgate national direction (to which effect must be given in regional and district planning instruments) and intervene in local planning processes. Furthermore, rights of appeal exist to the Environment Court on the merits of...
local and regional (but not national) planning decisions, which can override normative choices by local government even where a community of interest is local.164 This goes much further than the judiciary’s usual function of interpreting and applying the law and resolving disputes.165 It is not quite true to claim that New Zealand's resource management system is inherently decentralised, and the principle of subsidiarity raises some timely questions: do we have the balance between central, regional and local right? Should central government have the discretion to determine when there is a national community of interest, or should there be a more firmly defined constitutional or legal role for communities?

Some legislation also grants iwi the power to make legally binding decisions. This is particularly noticeable in relation to water and coastal resources.166 For example, holders of customary marine title recognised under the Marine and Coastal Area (Takutai Moana) Act 2011 are given the power to grant RMA ‘permission rights’ within a title area, without which an activity requiring a coastal permit cannot proceed.167 Such powers may to some extent erode legal certainty, transparency and scientific rationality in favour of cultural discretion, but this is seen to be justified in order to recognise an important and separate Māori community of interest that exists alongside – rather than below – national and local communities. Yet these powers usually remain subject to at least some considerations of the wider public interest.168

**Questions for discussion**

- **Is subsidiarity really a workable concept in practice?**
- **Does subsidiarity mean that central/regional/local control needs to be greater in some areas in New Zealand?**
- **How do we define where one community of interest ends and another begins?**
- **Who should get to decide where a community of interest is located?**

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164 RMA, sch 1, cl 27.
166 For example, see Waikato Tainui Raupatu Claims (Waikato River) Settlement Act 2010.
167 Marine and Coastal Area (Takutai Moana) Act 2011 (MCAA), s 68.
168 MCAA, ss 64-65.
171 Huakina Development Trust v Waikato Valley Authority [1987] 2 NZLR 188 (HC) at 210.
172 For example, see RMA s 8; EEZ Act s 12, Conservation Act 1987 s 4, CCRA, s 3A. See generally R Boast, ‘The Treaty of Waitangi and environmental law’ , in R Harris (ed.), Handbook of environmental law (Royal Forest and Bird Protection Society of New Zealand, 2004) at 513.
173 Huakina Development Trust v Waikato Valley Authority [1987] 2 NZLR 188 (HC) at 210.
177 Waiting Tribunal, Re Maunga Railways Land Report (Brookers, 1994) at 67-68.
178 See R Boast, ‘The Treaty of Waitangi and environmental law’ , in R Harris (ed.), Handbook of environmental law (Royal Forest and Bird Protection Society of New Zealand, 2004) at 517.
183 MCAA, s 52.
their participation as partners, rather than attempting to codify Māori environmental values in a protective way.\footnote{See MCAA ss 66-70; Conservation Act; s 6X(4A); CCRA, s 3A; RMA, s 36D; EEZ Act, s 59(3)); Helmbright v Environment Court [No 1] [2005] NZRMA 118.}

For example, a local authority under the RMA may choose to confer resource management powers to iwi authorities (subject to certain criteria).\footnote{RMA, s 33.} This can be described as a response designed to recognise and enhance mana (authority or influence), rather than pursue particular environmental outcomes. Other specific statutes grant compensation or return control of particular resources to iwi via the granting of property or resource use rights, as a result of Treaty settlements.\footnote{For example, see Māori Fisheries Act 2004, preamble.} Some of these interact with general environmental laws like the RMA to address distributive issues.\footnote{For example, see RMA, ss 165W.}

Setting aside specific distributional questions, the active protection of Māori values has had an environmentally protective flavour in practice.\footnote{For example, see RMA, ss 6(e), 7(a), 58(b), 104(3)(i).} This is because of the way in which such values have been expressed in laws, and because the Māori worldview is closer to Western ecocentrism. It may also be because Māori have, thus far, been more active as submitters in opposition to developments (although this is changing). The protective concept of kaitiakitanga, akin to the idea of stewardship, has been described as ‘the overriding Māori environmental ethic’,\footnote{A Tunks, ‘Tangata whenua ethics and climate change’ [1997] 1 NZJEL 67 at 84; RMA, s 2.} although there can be debate as to whether the concept is one in which only tangata whenua can act as kaitiaki (stewards) or if it is broader in scope. There are other concepts through which Māori environmental values may be understood. One is that of the taonga relationship, which is about treasuring both tangible things and intangible/spiritual concepts. Another is mātauranga Māori, or traditional knowledge. This is more than just the knowledge of scientific facts, and it may be said to encompass broader ideas like wisdom and systems of knowing. A third concept is that of mauri, meaning life force, vital essence or the essential quality of something.

The principles of the Treaty must also be taken into account in their own right under the RMA.\footnote{RMA, s 8.} Central to these are active protection, good faith consultation, a need for principles to adapt to changing times, mutual benefit, partnership, and a right for iwi to manage resources consistently with tikanga (customary practices).\footnote{See Carter Holt Harvey Ltd v Te Runanga o Tuwharetoa ki Kawerau [2003] 2 NZLR 349 (HC) at [27].} Furthermore, geographically specific legislation implements protective Māori values to varying degrees, either in a way that integrates with or stands alongside more general legislative regimes.\footnote{For example, the Waikato Tainui Raupatu Claims (Waikato River) Settlement Act 2010.} This includes an increasing emphasis on the importance of co-governance.\footnote{See P Salmon and D Grinlinton (eds), Environmental law in New Zealand (Thomson Reuters, 2015) at 691, 380-381; RMA sch 11.}

Therefore, although the active protection of Māori values in environmental law is not absolute,\footnote{See McGuire v Hastings District Council [2000] UKPC 43; [2002] 2 NZLR 577 at [21].} and can bow to the wider public interest, it is a very strong theme. The Privy Council has observed that decision-makers, at least under the RMA, must have particular sensitivity to Māori issues, since the law contains ‘strong directions’ concerning them.\footnote{McGuire v Hastings District Council [2000] UKPC 43; [2002] 2 NZLR 577 at [21].} Given the historical and cultural context of New Zealand, this is as much a comment about principle as it is about the legal requirement of a specific statute. There is also much to be said for treating Māori values like kaitiakitanga and mauri as valuable ways of thinking about environmental management in their own right, not just as the product of a process that respects the Treaty of Waitangi, returns mana, or upholds moral obligations towards indigenous people. A wider conversation may...
be needed as to whether any tensions exist between the recognition of human mana and the pursuit of mauri. The concept of mana for natural features – as exemplified in Te Mana o Te Wai – may be a tool to bridge any such gap.196

Questions for discussion

- What place should the Treaty of Waitangi, and associated principles, have in the resource management system outside of the settlement process?
- Is it possible to fully integrate Māori values within a predominantly Western system, and what form should those values take?
- Is the better way forward to recognise Māori values, or to shift management powers to Māori to exercise indigenous values themselves? If the latter, how is the role of Māori as developers to be managed?

The public-interest use principle

Resource management is not just about protecting the environment from use. It is also about making sure that some resources are used, and that they are used in socially and economically desirable ways. Within New Zealand’s neoliberal, free market paradigm in which most principles have developed over the last three decades, it has been largely unnecessary to create principles encouraging resource use. Economic self-interest has promoted such outcomes quite naturally. However, a broad principle can be recognised, even if it is not usually referred to as such. A convenient label for this is ‘public-interest use’, which describes the idea that where a particular kind of use is necessary to realise the public interest, the law should play a greater role in enabling or driving it.197 This principle can conflict with the principles discussed above, which tend to promote the protection of resources from use (such as intergenerational equity).

There are three key ways in which the law can implement the public-interest use principle. First, it can require or incentivise the deployment of activities having publicly important outcomes (such as requiring the provision of public infrastructure such as roads and sewerage systems by public authorities).198 Secondly, it can partly overcome environmentally protective provisions or process restrictions in other legislation.199 For example, first-instance decisions on land uses for significant infrastructure are made by the proponents – the requiring authorities – rather than local authorities.200 Thirdly, it can ensure activities occur in a way that actually achieves publicly important outcomes once they commence.201 These public good outcomes tend to be either economic or social in character, although some, such as the management of landfills and generation of renewable electricity, may have an environmental component. It is also notable that the principle applies not only to public bodies. It also applies to private persons conducting activities that provide a public good (such as telecommunications or electricity transmission).

The public-interest use principle certainly does not require that such activities are to proceed irrespective of their environmental cost. It simply provides an incentive to make applications and to give robust consideration in favour of resource use,202 as well as a reminder that publicly important activities must actually deliver outcomes once they are authorised.

Questions for discussion

- To what extent must a potentially harmful activity further the public interest in order to weaken environmental safeguards, or justify a different process of decision-making?

The conservation principle

In some geographical contexts we can observe the existence of a principle in New Zealand promoting a stricter approach to conservation and enhancement of the natural environment. Here, the aim is much more than just that resource uses be sustainable, or that we protect the basic needs of future generations. For example, such directions do not explain the continued retention of vast tracts of land as conservation estate. Instead, the principle recognises the need to protect wilderness and the intrinsic value of areas in their natural state. In this sense, it resembles the public trust doctrine, where the state has a responsibility to act as the guardian of the ecological values of public areas.203 It recognises that a public interest in the existence of wilderness areas is something more (or other) than the sum of private interests.

Outside these specific geographical areas, we can still observe a desire to protect some things in a way that is fairly strict.204 It is less about balance and mitigation, and more about preservation and prevention. For example, some absolute protections attach to specific animals rather than their locations or habitats.205 The protection

198 CMA, s 1A; LGA, s 10A; Fisheries Act 1996, s 8; New Zealand Recreational Fishing Council Inc v Sanford [2009] NZSC 54, [2009] 3 NZLR 438 at [39]; RMA, s 7(1); Land Transport Management Act 2003 (LTMA), s 95.
199 In relation to mining, see RMA, s 5(1)(a). In relation to housing supply, see Housing Accords and Special Housing Areas Act 2013 (HASHA Act). In relation to designations for key infrastructure, see RMA, s 172.
200 Although local authorities are requiring authorities, as are central government. However, some are private entities.
201 Gas Act 1992, ss 1A(a), 37, 43F, 46; Electricity Act 1992, ss 1A, 36; Electricity Industry Act 2010, ss 32(1), 42; Telecommunications Act 2001, ss 2, 70.
202 See J-F Investments Ltd v Queenstown Lakes District Council EnviC Christchurch CA6/06, 27 April 2006 at [195].
204 For example, see Forests Act 1948, pt 3A.
warning to this project: we must be careful not to throw the baby (eg positive case law) out with the bathwater (suboptimal parts of the system).

**Question for discussion**

- Should the conservation principle in New Zealand be strengthened outside the conservation estate? How?

**The precautionary principle**

No one can predict the future with complete accuracy. The precautionary principle tells us to take care where we face environmental risk or uncertainty. Where it is unclear whether an adverse effect will occur, that does not excuse a lack of action to address the effect. In lay terms, it is better to be safe than sorry. This goes further than the principle of prevention, which simply holds that it is better to prevent harm than to respond to it after the fact. Precaution is important both when fact-finding (identifying risks) and making judgements (assessing and managing risks).

The precautionary principle has a rich history in international law, with its most famous formulation being in Principle 15 of the Rio Declaration on Environment and Development. This proclaims that ‘where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’. Since the 1980s the principle has proliferated in international agreements in one form or another, and there is now argument as to whether it now amounts to a principle of customary international law in more than specific geographical contexts. There has been considerable debate over the difference between precaution as a principle (generally considered to be a strong interpretation, involving strict and enforceable bottom lines and a reversal of the legal burden of proof) and as an approach (generally considered to be a weaker interpretation, where there is discretion to weigh risks against opportunities).

Precaution is also already a significant part of New Zealand’s resource management system. Under most of our laws, risky activities cannot occur unless expressly authorised. We do not wait to clean up the mess afterwards. That in itself is a form of precaution, although it may sound more like common sense. The system goes further than this, though. Different approaches are taken for identifying and managing risk, which is entirely appropriate.

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206 For example, see RMA, ss 15A 15B, 38, 57(1), 60(1), 64(1), 64(3), 12, 3(a); New Zealand Coastal Policy Statement, pol 3.


208 For example, see Conservation Act, s 6.


210 For example, see UNFCCC, London Dumping Protocol, Montreal Protocol.


212 See UNFCCC, art 3.3: ‘Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures…’

213 Which in turn emerged from the less ambitious principle of ‘no harm’ and the associated duty to avoid ‘transboundary harm’, which developed as interstate obligations rather than environmental protections per se. Those, and related international duties like cooperation, are not explored here because they have limited relevance to New Zealand given its geographical position.

214 For example, see UNFCCC, London Dumping Protocol, Montreal Protocol.

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Risk identification should be evidence-based and scientifically determined.\(^{216}\) Identifying what risks exist (what could happen) does not require value judgements (what should happen). When identifying risk, some legal regimes simply require decision-makers to take evidence-based decisions based on reasonableness and evidential burdens of proof – for establishing risks.\(^{218}\) In other regimes, such as the RMA, there have been more heated debates about the appropriateness of specific legal criteria – precautionary standards and evidential burdens of proof – for establishing risks.\(^{219}\) Either way, the main concern has been to prevent low probability risks being artificially ignored. That is a crucial part of precaution; we do not want a legal framework that allows a two per cent chance of an event happening if that event would have a catastrophic impact.

Risk assessment and management, in contrast, require value judgements to be made. They are needed to determine what should happen in response to the risks identified.\(^{218}\) Under several of New Zealand’s existing laws, such judgements must specifically be informed by the need for precaution.\(^{219}\) Even under the RMA, which does not overtly refer to precaution, case law has imposed requirements to make decisions in a precautionary manner.\(^{220}\) This does not mean risk needs to be eliminated,\(^{222}\) but New Zealand’s approach is fairly protective compared to international ones.\(^{223}\) For example, there is no requirement that harm be serious, irreversible or likely for precaution to play a role. Generally, the greater a risk’s probability and magnitude, the more precautionary the response needs to be (including, in extreme cases, imposing a prohibited activity status).\(^{227}\) Whether remaining risks are acceptable or not cannot be answered in the abstract; it depends largely on value-based policies relating to the kinds of impacts and the character of the local environment in question. For example, a small chance of a low magnitude impact on coastal amenity may be more acceptable in a coastal area that already contains development (such as a port). Precaution itself does not tell us what we should value, only how we should approach risks to things that we do value. In some contexts, residual risks can be managed through adaptive management conditions, rather than avoided altogether.\(^{224}\)

### Questions for discussion

- What formulation of the precautionary principle is appropriate in New Zealand, and should it be uniform across all spatial, sectoral and legislative contexts?
- What role should adaptive management play in managing risk?

**The participatory principle**

In New Zealand, as overseas, public participation is a procedural cornerstone of environmental law\(^ {225}\) and is related closely to broader notions of human rights, natural justice, and deliberative democracy.\(^ {226}\) Internationally, the principle is often focused on access to information, the ability to be involved in the process of making decisions, and access to judicial redress.\(^ {227}\) This does not mean that individual decisions need be democratic, although in New Zealand the responsible decision-makers are often directly elected. The law generally aims for all relevant views to be considered; for choices to be informed by local knowledge; to provide catharsis for genuinely held values;\(^ {228}\) and to ensure that a balance between use and protection reflects the wider values of communities.\(^ {229}\) As Barton and colleagues have observed, robust participatory rights under the RMA ‘reflect a social consensus that goes back long before 1991’.\(^ {230}\) Wide participation is a safeguard in a regime that can impact significantly on property rights, and in New Zealand can be seen as a backlash to the marginalisation of public involvement in Think Big legislation of the early 1980s.\(^ {231}\)

In New Zealand the principle has generally operated on the assumption that people can participate to the extent that their interests are affected (although what this means in practice can change over time).\(^ {232}\) As such, broad participatory rights are particularly noticeable when producing plans, policy statements and regulations under the RMA and EEZ Act (and plans under the Local Government Act 2002) where objectives, policies, rules/ regulations and other provisions can affect a wide range of people.\(^ {233}\) Under the RMA there is provision for...

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216 Shirley Primary School v Christchurch City Council [1999] NZRMA 66 (EnvC) at [136].
217 Fisheries Act 1986, s 10(c). This kind of obligation may include the provision of environmental impact assessment (EIA); see principle 17 of the Rio Declaration.
218 For example, see McNally v Christchurch City Council [1996] 2 ELRNZ 84 (PT) at 105 106. Shirley Primary School v Christchurch City Council [1999] NZRMA 66 (EnvC) at [136].
220 For example, see Forret, ‘Scientific evidence and environmental litigation in New Zealand’ [1998] 2 NZJEL 39 at 60.
221 EEZ Act, s 34(2). Fisheries Act 1996, s 93(c); Hazardous Substances and New Organisms Act 1996, s 7.
224 Contrast UNFCCC, art 3.
225 For example, see Resource Management (Pollution Regulations) 1998, reg 4(1).
228 Generally, see B Barton, ‘Underlying concepts and theoretical issues in public participation in resources development’; in D Zillman, A Lucas and G Pring (eds), Human rights in natural resources development (Oxford University Press, 2002).
230 See Watercare Services Ltd v Minchinick [1997] 3 ELRNZ 511 (CA) at 525.
231 B Barton, K Jordan and G Severinson, Carbon capture and storage: Designing the legal and regulatory framework for New Zealand (University of Waikato Centre for Environmental, Resources and Energy Law, 2013) at 78.
234 B Barton, ‘Underlying concepts and theoretical issues in public participation in resources development’; in D Zillman, A Lucas and G Pring (eds), Human rights in natural resources development (Oxford University Press, 2002) at 101; RMA, sch 1; LSA, s 93A.
public notification, a right to make submissions, and a chance to appeal on the merits of decisions (with some restrictions). Participation is more constrained at the project (consenting) stage, because a narrower range of people may be affected. For example, applications can be limited notified (to those directly affected) or non-notified under the RMA depending on the extent of potential effects. Full public involvement is generally warranted even at the project stage where effects on the environment are more than minor, recognising that the environment is a shared resource in which wider society has an interest.

However, participation is not an absolute principle. If a submission is frivolous, vexatious or discloses no reasonable case, it can be struck out. Moreover, although a degree of advance consultation is required for rules and policies of general application, the law generally imposes no duty on an applicant to consult prior to the lodgement of a specific consent application. The vast majority of consent applications remain non-notified, and there is a trend to erode participatory rights in recent times.

Additional participatory rights are generally accorded to Māori. In many contexts, Māori are treated more as partners in governance and rangatira (chiefs/leaders) than a sector of the public. For example, in preparing RMA plans, councils are obliged to consult (in addition to Ministers of the Crown and other local authorities) iwi authorities and customary marine title groups. Regional coastal plans specifically must be prepared by a regional council in consultation with Māori. Similarly, iwi authorities are the only organisations from which the Minister for the Environment must seek comment prior to preparing an NPS. Many other provisions recognise the special status of Māori. This does not mean that Māori interests will trump others, only that Māori involvement is an important end in its own right.

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Regional coastal plans specifically must be prepared by a regional council in consultation with Māori. Similarly, iwi authorities are the only organisations from which the Minister for the Environment must seek comment prior to preparing an NPS. Many other provisions recognise the special status of Māori. This does not mean that Māori interests will trump others, only that Māori involvement is an important end in its own right.

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Participation is not just a conversation to be had in the context of regulatory regimes like the RMA, although that is often where tensions are greatest (due to the

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direct impact of decisions on private persons and private property). Wider questions are also important. For example, to what extent should the public be able to participate, or directly challenge, decisions on the allocation of Crown owned minerals? Or the creation/management of public parks? Or the expenditure of public money on infrastructure?

**The efficiency principle**

Efficiency is often not thought of as a resource management principle in the same sense as, say, intergenerational equity. Yet it is extremely important, because it is a consideration that may come into direct conflict with other principles. Efficiency is important both in terms of administrative process and the efficient use of resources.249 As Eli Louka has observed, it is ‘hard to characterize an excessively wasteful system as effective’.250 The concern can be seen in the current system, for example in provisions seeking to streamline decision-making processes in the RMA251 and in the integration of decision-making in the Act (compared to previously fragmented legislation). Efficiency is a matter to which particular regard must be had under the RMA, and the use of comparable units of measurement is encouraged where possible.252 Planning evaluations and an applicant’s assessments of environmental effects are not required to be perfect or exhaustive.253 The cost and effort incurred must generally match the scale and significance of relevant effects.254 For example, when considering applications for consent under the EEZ Act, the Environmental Protection Authority must base decisions on the best information available without unreasonable cost, effort or time.255 Efficiency is also extremely important in other parts of the system, for example in the management of the conservation estate, in land transport planning, and in the funding of resource management activities by local government. The alignment between legislative frameworks can have a bearing on efficiency, as can more mundane matters like simplicity and accessibility of language, process and structure.

However, efficiency is not the primary concern of the resource management system. It generally gives way to the public interest that exists in having robust environmental controls, as well as bending to the inevitable costs of public participation. For example, decisions are not currently reduced to cost-benefit analyses in the strict economic sense,256 and efficiency is only one matter to which particular regard must be had under the RMA.257 Most fundamentally, it is worth bearing in mind that efficiency is not the same as cost reduction. An efficient approach simply compares the cost of inputs with the value of outputs, and is therefore inextricably linked to the broader value we choose to place on particular environmental outcomes.258 Efficiency is a meaningless concept until we know what substantive outcomes we want to achieve. A costly system can still be an efficient one.

**Summary**

Principles are an essential part of the resource management system because they give substance to our worldviews and influence the more specific restrictions and directions in our legislation and institutions. They operate in the crucial normative middle ground between ethics (the basic ways in which we see the world) and rules (the binding restrictions or directions we must adhere to). They do not have to appear expressly in legislation in order to have influence; they can be important considerations in designing a system even if that system does not then make express reference to them.259 This section has described some of the key principles that exist (whether in laws or the literature) and that could inform a new system. It has also commented on how (or if) those principles inform New Zealand’s current system, in order to inform debate over what – if anything – needs to change in this space. Principles are ultimately all about how we manage relationships – between different people and between people and nature. Unfortunately, it is hard to observe any meta-principle to manage the relationship between principles themselves, which can frequently come into conflict with each other. The challenge for system reform is therefore not just which principles to adopt, but also how strict they should be and how they should interact with each other in a coherent way.

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249 RMA, s 7(b); RMA; E Hudspith, ‘Freshwater management in New Zealand’ (2013) 16 NZIEL 277 at 284.
252 RMA, s 32(2)(b); M Christensen, ‘Valuation of natural assets under the Resource Management Act’ (2013) 17 NZIEL 291 at 294.
253 RMA, s 32, sch 4.
254 RMA, sch 4, cl 2(2)(c), s 32(1)(c); EEZ Act, s 39(2).
255 EEZ Act, s 61(5).
257 RMA, ss 7(b) and s 32.
259 For example, the RMA does not refer to precaution specifically, but is clearly informed by the need to take care when authorising potentially harmful activities.
7. INTERNATIONAL LESSONS
Introduction

In October 2017 two of the EDS project team (Greg Severinsen and Raewyn Peart) conducted a tour of eight countries in Europe and North America during which they talked to leading scholars and practitioners about their experiences and innovative ideas in resource management. Set out below are some of the ideas and examples generated from this tour. They are intended to broaden thinking about reform potential and provoke debate rather than to present any well-formulated or coherent recommendations. They are preliminary ideas only, which have not yet been fully explored or integrated into the project’s thinking. The following section considers these ideas and examples independently, but in a way that roughly follows the conceptual framework of the project. It starts with ideas of a normative character, then considers structural features of the system, and finally explores ideas for the ways in which the system operates.

Establish a common vision and direction

Articulate a clear vision and set of desired outcomes for what the system is designed to achieve

‘It is the government’s job to provide guidance on what society needs, and the private sector’s job to make money within the realms of that guidance.’

A common theme from the tour was that having an overall vision is important. A vision and desired outcomes need to be articulated at a national level, and then cascade in more detail to the regional and local levels. This helps to align different government sectors and levels in a common direction. It provides clear signals to the private sector as to what the government is seeking to achieve, and therefore with what policy directions the private sector needs to align. It also serves to create both community and investment certainty. What the private sector needs is clear rules and it is the government’s job to provide these. The market will go wherever it makes money, so government needs to educate business that it can make money doing the kinds of things government wants it to do. Legally binding targets can be extremely effective in changing practice, and they also get priority when money is tight. This is exemplified in the UK Climate Change Act 2008: ‘it is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline’. We were told that there is a lot of activity around climate change because of the Act and its binding nature.

Legally binding targets can be extremely effective in changing practice, and they also get priority when money is tight. This is exemplified in the UK Climate Change Act 2008: ‘it is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline’. We were told that there is a lot of activity around climate change because of the Act and its binding nature.

Similarly, the Well-being of Future Generations (Wales) Act 2015 sets out seven wellbeing goals and requires all public bodies to set and publish objectives designed to maximise their own contribution to achieving each of the goals, as well as taking all reasonable steps to meet the objectives.

Government must publish indicators and set milestones and then publish an annual wellbeing report on progress made towards their achievement.

In other countries, such as the Netherlands, a national direction is often articulated in a national spatial plan, which outlines the main spatial policy objectives of the government and policies to pursue them. This then cascades down to lower planning levels.

Design a planning/management system that is proactive about achieving positive goals

‘If the system is only about managing adverse effects, the energy is all about bad things. It also needs to be about positive things, what you want to happen.’

In many other countries planning is very much focused on proactively achieving positive community outcomes, often articulated in the vision and objectives discussed above. The RMA, which focuses on ‘effects-based’ management, has a focus on preventing or reducing public ‘bads’ (ie environmental degradation) rather than on increasing or creating public ‘goods’. This means that the system by definition is reactive – waiting for a developer to propose something rather than being proactive in encouraging the type of development a community needs, and maximising the public goods which can be delivered by the development process. As a result, fewer public benefits are derived from development. This highlights the importance of having a first-principles discussion around the role of planning and planners in the system, and the proper role of the market.

Reconsider the role of planning and the market

Strengthen the role of planning

‘The role of planning is to steer the futures of cities much more than we are currently doing. It has been too reactive.’

‘Planning is now connected with much broader agendas such as the transition to a low carbon economy, reducing social-spatial inequality, and creating opportunities for economic growth and prosperity.’

The OECD explains that land-use decisions by landowners inevitably affect other people, but they do not typically consider these externalities (either positive or negative). Land use decisions have consequences that are far reaching and include housing affordability, long-term economic growth, environmental quality, social inequality and the mitigation of, and adaptation to, climate change. Every land use decision is very context-specific and so case-by-case regulatory decisions have to be made to weigh the interest of landowners in developing their land against the desire of the public for developments that are beneficial for broader society. This means that planning is necessary to balance
private and public interests. It is also necessary to coordinate public and private investment decisions.

The purpose of planning in European cities is very much about a social agenda of achieving social cohesion, quality of life and sustaining the family. Another concept focuses on wellbeing, including the wellbeing of people and of nature, and including the wellbeing of people in the future and in other places as much as those in one’s own community. Planners are moving away from just approving/declining developments to facilitating the development process so that things can happen (co-creating). This requires a shared vision of the future of the city and what primary goals need to be achieved. These can then be put into policies and strategies that planners can ‘lean on’.

The development of strategic plans is a mechanism that can provide a stronger planning framework. In the Netherlands strategic spatial plans (called structure plans) are prepared by all three levels of government (national, regional and local). They outline the main spatial policy objectives of government and the policies to be applied to pursue them. More generally on the Continent, strategic planning strongly drives land use planning (described as a plan-led system), whereas in London and Vancouver planning is less prescriptive, with developments largely negotiated on a case-by-case basis. The advantage of a plan-led system is that society-wide conversations can take place at a higher strategic level rather than the public only being involved when a local planning officer makes a decision about the building next door.

Planning is inherently becoming more complex. Large planning departments can manage complexity but smaller ones can struggle. In France, advisory planning agencies provide planning expertise and hands on capacity building for councils and we could consider a similar facility in New Zealand.

**Support a compact urban form**

> _Sprawling cities impose significant environmental and fiscal costs and are likely to lower economic growth in the long term. Further, they do not necessarily offer a higher quality of life for residents._

In all cities that we visited, there was overwhelming support for the proposition that planning should be seeking to achieve compact urban areas rather than sprawl. The OECD recommends that land use planning should encourage densification, particularly close to city centres and along public transport corridors. There is growing evidence that designing for car-dependent, dispersed, single-use communities is an unsustainable choice and the most expensive choice a city can make when looking at the long-term tax base and the cost of building and maintaining infrastructure. Research has indicated that investing in walkable cores and neighbourhoods provides 20 times the tax revenue and job productivity per acre when compared to car-dependent sprawl.

A good compact city policy needs to ensure that it avoids making cities unaffordable by using other policy levers such as ensuring a vibrant rental market, providing state-supported housing, and freeing up enough space for infill and brownfields redevelopment. An urban limit is problematic if densification is not allowed at the same time. Densification can be assisted by easing land use restrictions but it often also requires proactive measures such as transferable development rights and incentives for compact development in brownfield sites, which for physical and legal reasons can be more complex and costly to develop.

Transportation policy can drive compact cities. In Vancouver, a decision was made not to build any new roads within the city limits and more investment was put into pedestrian infrastructure. This meant that it took longer to drive to a destination, but somewhat counter-intuitively, commuting times got shorter over time. This was because people were incentivised to live closer to their places of work. However, as families were drawn to live in the central city where there were more job opportunities, appropriate housing development was not provided. This was because the market was not responding effectively to the demand, as developers could make more money selling single-bedroom apartments than larger homes. So the council decided to force them to provide larger homes (by requiring that all developments have around 10 per cent family-appropriate households with at least three bedrooms). This highlights the important interrelationships between land use planning, transportation policy and housing policy when considering substantive outcomes.

**Require the provision of affordable housing**

> _Australia is shifting from “affordable housing” to “affordable living”, which takes into account other costs such as transportation._

The OECD considers that the construction of affordable housing is an effective way to make cities more inclusive. It recommends that public policy should ensure that housing is provided in all price categories. Requiring developers to include a certain percentage of affordable housing in their developments has proved one of the most effective ways of achieving this. For example, in Copenhagen the percentage is 20 per cent. This serves to mix affordable housing in with higher value housing rather than building separate low income areas. In Amsterdam, where the city owns most of the land and thus has a powerful lever to influence development, land is made available to developers on the basis that a certain percentage of homes (around 30 per cent) must be for social housing. In the United States, the California Coastal Commission was for a time very effective in promoting the provision of affordable housing by requiring that 25 per cent of all large scale development on the coast was affordable. But the developer lobby caused this power to be taken out of the legislation, and now the California coastline is a very expensive place to live.

It is worth keeping in mind that how we define ‘affordable’ has important consequences. Simply requiring the provision of smaller and therefore relatively cheap houses
may not make them affordable if their price still remains beyond the reach of most people. Providing cheaper housing on the outer fringes of the city may also not enable affordable living when higher transportation costs are also considered.

**Set enforceable environmental standards**

**Specify a set of clear measurable and binding environmental quality standards**

‘**Clear quality standards that are very strict are, for me, the key to success.**’

Norms need to do more than just set a broad vision and define the proper roles of planning, regulation and the market. They also need to take the form of meaningful restrictions and incentives. In Europe, we observed a common view that the most effective environmental protection tools deployed were the European Union (EU) Directives. These have specified mandatory environmental quality standards that are directly measurable, and which were required to be reached within a defined time period (around 10–15 years after the Directive came into force). The standards themselves are based on scientific assessment rather than evaluating and weighing socioeconomic factors. That weighing exercise occurs at the stage of identifying the most appropriate actions required to achieve the standards, but cannot question the standards themselves.

The experience overseas has been that when hard standards are put in place, and are strictly enforced, energy moves away from contesting the standards into innovating in order to meet them. It is important, in this respect, that there is trust in the durability and predictability of the system, and in the standards being immovable and enforced. Otherwise energy is expended on politically lobbying, undertaking multiple legal challenges and seeking to subvert the system rather than on changing behaviour in order to comply. If the government wants to encourage, or make room for, a new industry or economic growth more generally that will potentially drive environmental quality down past the limit, it needs to find a way of reducing current impacts to create environmental ‘headroom’ for future development.

Regulation can also be used to create markets for goods that the private sector can then innovate to provide. This is an example of technology-forcing: regulating for a standard that cannot be met with current technology. Technology-forcing regulation can be effective, as has been the case in California. One approach is to require existing standards to be met now, and then to set a tougher limit over time to force technology development.

In New Zealand there is provision in the RMA to set binding national environmental standards (NESSs) but these have not generally been used to set minimum environmental quality standards, or to provide for a strategic improvement of quality over predictable time periods. (The exception is the NES on Air Quality that sets an ambient air quality standard for contaminants. In addition, the NPS for Freshwater Management 2017 specifies national bottom lines for some freshwater quality attributes.) Overall, this has meant that there is no assurance that minimum environmental quality standards will be maintained. This vacuum has likely contributed to the ongoing erosion of environmental values.

**Provide for sanctions if environmental standards are not met**

The EU Directives have been effective in a large part because of the role that the European Commission plays as the ‘Guardian of the Treaties’. It has a strong role in monitoring implementation and compliance. Where a Member State is in breach of a Directive, the Commission can take it to the European Court of Justice. If the breach is confirmed the Member State can be heavily fined. This sanction acts as a powerful incentive for compliance.

Currently in New Zealand there is no agency specifically tasked with ensuring that the RMA or national instruments such as NPSs and NESs are being properly applied and complied with by lower tiers of government. Under the Environment Act 1986, the Ministry for the Environment only has an advisory role, and the Parliamentary Commissioner for the Environment only has an investigative and advisory role. The Department of Conservation has as one of its functions ‘to advocate the conservation of natural and historic resources generally’ under the Conservation Act but this is a different role to that of supervising the correct application of legislation and national instruments. Relief may be sought from the Environment Court, but this relies on legal action being taken by a party and is thus a reactive (and expensive) approach.

**Spatially protect important areas**

**Identify a national spatial network of sensitive/important areas**

Restrictions need to be based on more than just targets that apply across the board. The spatial component of restrictions is extremely important in order to achieve good environmental outcomes. The EU Habitats Directive, for example, provides an effective model for spatial protection of important habitats, and could equally be applied to outstanding natural landscapes. Member States are required to spatially identify a network of habitats (termed ‘special areas of conservation’ or ‘Natura sites’) according to criteria set out in the Habitats Directive. The assessment is based on science, not on a weighing of policy matters. The Member State networks are then assessed by the European Commission at the EU level for ‘sufficiency’ in order to form a coherent European ecological network. The EU provides some co-funding for the management of the areas. There is also a surveillance system to monitor the conservation status of the areas with regular reporting on status required by Member States.

There is also a direct link created between EU law and national planning and permit applications. A proponent needs to assess the possible effects of a project or plan
on the conservation objectives of the Natura site, and if it is not certain that there will be no significant impacts, the proposal cannot be authorised. It can therefore only go ahead if it will not adversely affect the values of the site (similar to the requirement to avoid adverse effects on outstanding natural landscapes under the New Zealand Coastal Policy Statement and as confirmed in the King Salmon case). A notable feature of the network of Natura sites is that they are often on private land (it is not the same thing as the inclusion of land within the public conservation estate in New Zealand), and they do not prevent the use of that land for private activities. Only the particular values associated with the restriction are protected.

In Denmark the coast is protected from development by strong regulations which decree that there be no development within 200 metres of the water’s edge, and that special permission must be obtained from the government to build within 3 kilometres of the coast. This has been effective in protecting the undeveloped nature of the coastline.

In New Zealand there is currently no national criteria for identifying important sites, or provision for a national assessment of the sufficiency of spatial protections provided in regional plans and mechanisms for filling any gaps. There is also no formalised monitoring or reporting system for the status of the sites. To address this, regional councils could be tasked with initially identifying outstanding natural landscapes (ONLs), areas of outstanding natural character (ONCs) and a network significant natural areas (SNAs) (terrestrial, freshwater and marine) based on statutory criteria established nationally from scientific and technical advice – not the balancing of environmental and socio-economic factors. Technical support could be provided to councils to undertake the assessment and identification process and where a council does not have the resources to undertake the task it could be led by a national agency (such as the Department of Conservation).

Councils could then be mandated to submit their full proposals to a national agency by a specified date. The national agency would be tasked with assessing the proposals collectively on a national level, to determine whether all important landscape/natural character/habitat categories/areas throughout New Zealand were adequately covered. Where gaps were identified, the relevant regional council could be required to address them through proposing additional sites. After a public consultation process (at a national level – which could be through a Board of Inquiry or similar), the national network could be finalised and gazetted. This would provide certainty to landowners, business and the broader community and avoid resources being expended on endless litigation over the location of significant areas. National rules could set minimum standards according to the status of areas, and regional councils and territorial authorities could have the flexibility to determine what actions needed to be taken to meet these standards. Regular reporting by councils on the status of the areas within the national network could be required.

**Provide for institutional and legislative integration**

**Use a mix of sectoral and integrated systems**

The institutional and legislative design of a system can have a large bearing on the outcomes that are achieved. A sector-by-sector approach can be more effective in solving urgent problems due to the narrower focus. Sectoral quality standards in the EU have been very successful. The Netherlands operates a separate water management
system that has its own self-funding tax system and is seen as a world-leading regime. In Sweden (as in most countries), environment and planning legislation are separate. However, there are explicit linkages between them and the environmental protection regime trumps the planning regime. There is a risk that integration and cohesion can weaken clear environmental quality standards, as they are then open to more trade-offs. It is possible to retain a sectoral approach while operating a one-stop-shop permitting system with the end user in mind, where an applicant interfaces with one entity and that entity then deals with multiple responsible agencies. The Netherlands has operated such a system with a, seemingly, reasonable degree of success.

On the other hand, sectoral approaches are not as effective in dealing with more complex, interlinked environmental challenges, and other regimes are now moving towards a more integrated approach. The EU has more recently been adopting ‘framework’ directives that comprise softer legislation rather than directly enforceable standards. This has long been a feature of international environmental law as well. Their effectiveness depends more heavily on bringing people together to discuss issues and agree on the way forward rather than strict enforcement of standards.

The California Coastal Commission provides a useful model of a dedicated agency established to focus on complex environmental challenges in a particular spatial area (the coastal zone). It acts as an integrative body in the coastal zone, performing the functions of several other agencies. The Commission directly approves some permits and approves local plans under which councils approve permits, with appeals from those decisions heard by the Commission. It also works with local government to assist with their long-term planning and to assess whether their plans conform with the California Coastal Act and other state government requirements. The Commission is small, with a budget of US$220 million per year and 145 employees. While it adds a layer of institutional complexity to an already alarmingly complicated system in the United States, it has the advantage of being able to make decisions that may be locally unpopular but are in the broader public interest.

Urban development authorities have been utilised with some success in overseas cities, including in the Paris region and London. These enable the public authority to guide development in a more hands-on way, as well as to capture the value uplift from rezoning land and/or providing transport infrastructure, and these financial gains can be used to fund infrastructure and other public goods.

The Netherlands and Wales have used the RMA’s integrated model as inspiration for their recent law reforms, and England is also considering aspects of the New Zealand system in light of Brexit and a move away from EU environmental law. And so, 25 years after New Zealand bravely adopted an integrated planning and environmental management system, other countries are starting to follow this approach.

Provide mechanisms to assess the broader impacts of policy

In the countries we visited, a large proportion of land use and environmental planning is the responsibility of local (municipal or county) government. But many of the policies that shape spatial development and the demand for land are decided at the national or regional level (like immigration, transportation and sectoral support/subsidisation). This means that national policies have a significant impact on land use/the environment at a local scale, and so need to be responsive to the objectives of local and regional governments. An effective mechanism to achieve coordination between all the levels of government, flowing both ways, is an important component of the system.

Tools to help address this matter could include undertaking strategic environmental assessments of policy, widening the scope of regulatory impact statements to look at the environmental impacts of policy, or using the Parliamentary Commissioner for the Environment to provide an environmental impact check on government policy. One interesting model we were alerted to is the Congressional Budget Office in the United States, which provides an independent check on the cross benefits of laws before they are passed, and has cross-party support.

Integrally link land use and transportation planning

‘Never utter the word “transportation” without land use.’

Transportation planning and expenditure has a fundamental impact on land use, and therefore transportation and land use decision-making need to be integrally linked. In the urban context, a transport system needs to have a broader vision than just moving people around a city and must consider how it can underpin a more prosperous and attractive urban area. In Hong Kong, the transport authority has authority over land use development. In California, agencies are required to design infrastructure in a way that results in cars and trucks driving fewer miles. This has driven big changes in transportation investment plans, resulting in more investment in walkable and liveable communities rather than highway expansion and greenfields growth.

In New Zealand land use management and transportation planning are addressed in separate pieces of legislation (the RMA and the Land Transport Management Act 2003 (LTMA)) without clear linkages between them. The purpose of the LTMA ‘is to contribute to an effective, efficient, and safe land transport system in the public interest,’ which makes no reference to impacts of transportation on land use or the environment.

Deploy a broad range of tools

Align economic incentives and disincentives

Establishing norms and institutional/legislative structures for a system will be of little use if the tools used to achieve
those norms are not effective. Overseas a broad range of tools is used to achieve the aims of the system.

If environmental or land use policy goals are to be achieved, financial incentives (particularly tax policies) need to be aligned with them. Financial incentives can be powerful drivers to encourage desired outcomes. The OECD notes that different forms of land use have different fiscal impacts on councils, and this can affect a council’s level of support for different land uses (sometimes in perverse ways). If councils receive higher fiscal net benefits from development, they are more likely to favour extensive development patterns and less likely to consider its negative impacts. It is therefore important that fiscal systems provide incentives that are in line with the spatial public policy objectives.

Financial incentives or disincentives for landowners are also an important tool to influence land use in the public interest. A broad range of such tools is available and have been applied in various contexts, and these include:

- **Property taxes**, which can be differentiated to encourage desirable developments (and discourage undesirable ones)
- **A pure land value tax**, which provides a strong incentive for the efficient use of the most valuable land (as opposed to property transaction taxes which prevent efficient land use and so should be avoided), although broader questions over the most desirable use of land for public policy reasons should also be considered
- **Brownfields redevelopment measures**, such as subsidies or grants, which create incentives to develop brownfield sites (and therefore to protect greenfield sites)
- **Transferable development rights**, which move development rights to desirable areas and away from undesirable areas
- **Historic rehabilitation tax credits**, which provide a subsidy to preserve buildings/neighbourhoods with historic/cultural values
- **Development impact fees**, which pay for the public costs that a development creates
- **Betterment levies**, which capture the increase in property values due to public actions (e.g., upzoning or investment in transportation or other infrastructure)

**Provide for flexible zoning**

‘Single use zoning creates mono-functional neighbourhoods and makes mixed-use developments impossible ... and conflicts with objectives to foster compact development and reduce sprawl.’

There are limitations to zoning, as a planning tool, as it can only restrict new or changing land uses and cannot meet interconnected sectoral challenges. Spatial planning is a broader concept that is better equipped to address these issues, so is an important component of a planning system.

In some overseas cities, there has been a move away from single-use zoning (such as residential, commercial, industrial and the like) to ‘environmental quality’ or ‘nuisance’ zoning to allow more flexible development and also to encourage homes and workplaces to be co-located to reduce commuting distances/times. This is somewhat congruent with the underlying approach taken in the RMA of focusing management on environmental effects rather than on activities.

Another related approach is to create specific zones that are more open to experimentation and temporary uses in order to increase flexibility (an approach which is being implemented in the Netherlands). These areas are subject to fewer rules and each project is judged on its merits within overarching guidelines and objectives about community needs and aspirations. To be effective, they require more effort up front to obtain consensus on the project, and they necessitate a higher degree of capacity at council level to manage the negotiation process. In addition, such flexibility needs to be embedded within a framework of strict regulations to protect important values such as nature/biodiversity (as is provided in the case of the Netherlands by the EU Directives) and historical areas, and supported by reasonably predictable policies so that everyone is on the same page.

**Establish urban design panels**

Urban design panels are commonly used in cities overseas to help ensure that individual projects contribute to good urban design. Copenhagen is in the process of setting up a ‘Public Space, Public Life Panel’. Every project that impacts on the public realm will be discussed by the panel. It has a focus on managing the ‘edge zones’ between public and private space, so that these are transparent, inviting, lively and safe. In Amsterdam there are ‘Beauty Commissions’ which review all proposals. Proposals do not receive consent if the Commission opposes them. There is also a Visual Quality Plan that describes the desired spatial appearance of the public spaces and buildings.

**Utilise government procurement**

Government procurement can be a powerful way of driving change in order to achieve public policy goals. Innovative tenders are a way of bringing the public and private sectors together to solve complex problems for which a solution does not currently exist. In these processes, the challenges are tendered out rather than the solutions. They focus on creating incentives for the market to develop new approaches to solve intractable problems faced by society. In Copenhagen, this approach has been applied to creating an app store for the use of public data, and the re-use of household plastic waste and building materials.
**Broaden mechanisms for public participation**

**Explore innovative ways to provide for effective public participation**

The public needs to be consulted early on in resource management processes to be useful. However, in other countries the public does not decide the outcome. An open court process is seen as being only accessible to those with resources and often acts to benefit the wealthy, so is not necessarily considered to be a fair process. We heard of various alternative models which have been applied to obtain public input into decision-making.

In Copenhagen the public has 6–8 weeks to comment on the local plan. Any criticism is taken into account when the plan is presented to politicians, but the council makes the decision as to whether the local plan will be adopted. There are no appeal rights. It is considered that otherwise nothing would get built that was publicly important on account of NIMBYism. The process also enables planning to be responsive to changing circumstances. Environmental protections are provided by national and EU law, and need to be complied with by councils. Thus the Danish operate a more flexible planning process, within a stronger environmental protection framework, than is currently the case in New Zealand.

Vancouver has used a Citizen's Assembly process whereby people are randomly selected to be part of a year-long process to hear from experts and to come up with a plan. The plan is not legally binding, but has moral authority. This approach has worked more effectively when the community is given strong parameters that need to be met, such as accommodating a certain amount of population growth within the area.

Vancouver has also undertaken neighbourhood planning, whereby the community undertakes the planning process and produces a community plan. The community plan goes to the council, which either adopts the plan or not. The plans have resulted in policy and zoning changes.

There are other ways to include checks and balances in the system, without providing full appeal rights to the public, and these include:

- Only allowing appeals for certain externalities (eg these could include the matters currently contained in section 6 of the RMA)
- Having more top-down regulations that councils need to comply with, thereby reducing the matters that can be challenged
- Having clear and precise legislation, which defines what is important and what needs to be protected in order to avoid legal doubt and therefore the need for court cases to clarify the meaning of provisions
- Establishing an agency to assist councils in developing plans to help train their staff and also potentially to have an oversight role over the planning process (such as through an initial approval process for the plan – similar to the role the California Coastal Commission plays in approving local council plans in the coastal zone)

**Establish a robust information system**

**Set clear metrics and regularly monitor**

The OECD has concluded that more systematic monitoring and evaluation of land use and the effectiveness of regulations is required in member countries. Currently, it is difficult to know which policies are working well at a local level and which are not (internationally as well as in New Zealand). Monitoring and evaluation are important, as traditional land use planning and spatial planning are often not effective in achieving their objectives. *What* we measure is also important. Measures such as GDP, for example, do not include natural capital. There needs to be good measurement of where we are now, of the target set, and of the progress by which we get there. In Vancouver, the Greenest City Action Plan, which has been effective in raising the city from the 500th to the 3rd or 4th greenest in the world, is very much based on setting and closely tracking progress against a set of defined metrics. If the council is not meeting its targets, it is assumed that someone is not doing their job, and action is taken to rectify the situation.

**Develop an integrated data management system to support decision-making**

Public investment in data is important to support a planning system, and it enables faster decision-making. A database needs to be built into planning systems. Some countries, like the Netherlands and France, are extensively using geographic information system (GIS) platforms and endeavouring to integrate their systems nationally.
8. CONCLUSION
The purpose of this project is to take a first-principles look at the resource management system in New Zealand and outline options for reform. This working paper has considered five key things in relation to the project: the development of a conceptual analytical framework; the context in which reform would occur; an exploration of ethics and worldviews in the context of the environment; a consideration of principles; and a presentation of key insights gained from EDS’s recent international study tour.

The resource management system is a collection of aims, design, governance, processes and mechanisms of laws and practices through which public interventions are taken for the purpose of influencing the use, protection, allocation and spatial/temporal distribution of natural and built resources within New Zealand. In a nutshell, it is about how we shape our physical surroundings.

The way in which the system is to be explored in the project is through themes. These themes are the broad things that a system must have or must do. There are three levels of themes: normative (what we want); system (the architecture of the system); and operational (the tools to achieve our aims). Conclusions on general themes (the basic things the system must have) will also be stress-tested within the context of specific domains, sectors, and spaces.

The context within which reform would occur is one that has been shaped by foundational changes to law, policy and institutions in the 1980s and 1990s. It is also one in which we face an alarming suite of problems, challenges and questions. Biophysical environmental indicators have declined almost across the board. At the same time, urban and social issues have become acute, mainly around issues of housing affordability and infrastructure provision. As population increases and resources become scarcer, we are seeing increasing challenges around the allocation of resources.

The starting point for first-principles reform must be the basic worldviews or ethics upon which our system rests. A great many ethical theories exist in the fields of environmental and resource management. This paper has explored two main categories (anthropocentrism and ecocentrism) and subcategories within each. It has suggested that a largely Western, neoliberal and anthropocentric ethic has failed to achieve the kinds of outcomes we want as New Zealanders. That does not mean we need to reject the ethic entirely, but it does mean that we should be aware that such a worldview is a choice, not a natural order. It also means that we should be open to more ecocentric ideas if they can orient our outlook in a way that is more likely to get us to where we want to go. We can shift ethics over time.

Ethics and worldviews need to be translated into real action and behaviour change if they are to be meaningful. The first step in doing so is to consider what our principles should look like. These flesh out our basic worldviews, and provide guidance for solving difficult resource management questions (although they do not give us absolute answers). This paper has explored a series of key principles, all of which will be important – in some form – in any new system. Unfortunately, principles can come into conflict with each other. A challenge for system reform is therefore not just which principles to adopt, but also how strict they should be and how they should interact with each other in a coherent way. Principles also need to inform the rest of the system – its structures, principles, and processes – in a way that actually achieves our aims on the ground. It is to these kinds of questions that the project will turn next.
REFORM OF THE RESOURCE MANAGEMENT SYSTEM

The Next Generation
Working Paper 1

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