Horizontal and Vertical Integration of Sustainability into Policymaking, Planning and Implementation of Renewable Energy Projects—The New Zealand Model

David Grinlinton

Abstract While sustainable development is now widely accepted as an international normative principle guiding human interaction with the natural environment, it can be little more than an aspirational platitude unless incorporated in a practical and enforceable way in domestic regulation and processes. This paper addresses the vertical and horizontal integration of sustainability into policy-making, planning and decision-making with a particular focus on renewable energy developments. New Zealand is unique in the way it has incorporated the principle of sustainability as an enforceable concept in domestic legislation. The approach incorporates a hierarchical model with an environmental sustainability objective at the apex. This influences policy-making and "macro-planning" at the national and regional levels, which in turn influences lower level planning and operational decision-making. The system is integrated both vertically between different levels of government (central, regional and municipal), and horizontally between central and local government and resource management agencies, corporations, public interest groups and individuals. The system is a result of an exhaustive administrative and law reform process in the late 1980s-early 1990s that restructured central and local government agencies, and implemented major legislative reform. The underlying conceptual model may be described as "integrated environmental management" (IEM). The system has now been in place for 25 years, and has been continually amended and refined in that time. It provides a useful model of a considered and coherent approach that facilitates sustainable management of the environment and natural resource development, including encouraging greater uptake of renewable energy.

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New Zealand Legal Terms and Abbreviations Used in this Part

EC or EnvC or Env Ct	Environment Court
DC	District Court
HC	High Court
CA	Court of Appeal
SC	Supreme Court
NZSC	New Zealand Supreme Court
NZLR	New Zealand Law Reports
NZRMA	New Zealand Resource Management Appeals
Judge	Judge of the Environment Court or District Court
Justice	Judge of the High Court, Court of Appeal or Supreme Court
J	Abbreviation for Judge of the High Court, Court of Appeal or Supreme Court
JJ	Abbreviation for two or more Judges of the High Court, Court of Appeal or Supreme Court
CJ	Chief Justice

1 Introduction

This paper addresses the integration of sustainability into policy-making, planning and decision-making in regard to the management and use of natural resources with a particular focus on renewable energy projects.

Sustainable development is now widely accepted as an international normative principle providing governance principles for human interaction with the natural environment (Bosselmann 2008). However, the principle of sustainable development is little more than an aspirational platitude unless incorporated in a practical and enforceable way by states in domestic environmental and natural resource development regulation, and in relevant administrative and legal processes.

At the national level, governments develop policy, enact legislation and manage activities impacting upon the environment through ministries and agencies, and through control of activities on government owned land. Local government agencies and municipalities usually exert the most immediate environmental and natural resource management, often through town and country planning rules and the management of water and atmospheric emissions.

While internationally agreed principles such as "sustainable development" (Brundtland Report 1987, at 27)[1] and "the precautionary principle" (Rio Declaration 1992, Cameron 2006)[2] find expression in many international instruments, it is far more difficult to incorporate them into domestic regulation in a meaningful way. New Zealand is unique in the way it has incorporated the principle of "sustainable management of natural and physical resources" as an enforceable concept in domestic legislation (Resource Management Act 1991, Sect. 5). The approach incorporates a hierarchical model placing sustainability at the apex, which influences policy-making and "macro-planning"[3] at the national and regional levels, which in turn influences lower level planning and operational decision-making. The system is integrated both vertically between different levels of government (Central, Regional and Municipal), and horizontally between local government and other resource management agencies. The system requires integration of administrative bodies and government agencies, along with complementary regulatory reform, and enforcement agencies such as the "environment court". The underlying conceptual model may be described as "integrated environmental management" (IEM) (for development of the concept, see Mitchell 1986, pp. 13–26; Rabe 1986; Bartlett 1990, pp. 235–254; Grinlinton 1992).

The New Zealand system has been in place since 1991, and has been continually developed, refined and interpreted by the courts in specific environmental and resource development cases. A recent decision of the Supreme Court of New Zealand [*Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* (2014) NZSC 38] has clarified the way in which the sustainability principle is to be implemented through policy and planning instruments in specific cases. This paper will review that decision, and other decisions of the Courts, and apply them to renewable energy developments that are ongoing. In New Zealand, currently around 37 % of total primary energy supply is made up of renewable energy sources (primarily hydro and geothermal), and 75 % of electricity is generated from renewables (NZ Govt. 2014, pp. 3, 55). The government has an objective to achieve 90 % renewable electricity production by 2025 (NZ Govt. 2011, pp. 6, 9). The system therefore provides a useful model for other jurisdictions that hope to increase the uptake of renewable energy.

[1]The widely accepted definition of "sustainable development" is development that "meet[s] the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report 1987, 27).

[2]The "precautionary approach" was defined in the Rio Declaration (1992): "where there are threats of serious or irreversible damage, lack of full scientific evidence shall not be used as reason for postponing cost-effective measures to prevent environmental degradation". The application of the principle in the context of environmental risk management in New Zealand is discussed in Cameron (2006).

[3]In this context "macro-planning" includes national and sub-national policy statements and regulatory instruments dealing with higher-level environmental and resource management aims and objectives, as opposed to conventional town planning ordinances and rules.

2 The IEM "Model"—An Overview

The interrelationships between the various elements of the biosphere are complex and environmental and natural resource management should reflect this interdependence. An IEM approach to natural resource and energy developments should provide for policy-making, regulation and decision-making that accommodates related issues, flow-on consequences, and the cumulative effects of actions and activities. It must be applied not just through isolated reactive statutory measures, but across the full spectrum of administration, regulation and implementation, including (Grinlinton 2013, pp. 26–32):

- administrative structures,
- policy-making and planning,
- legislation and regulation,
- processes of participation and decision-making, and
- operational implementation including environmental monitoring, impact assessment and enforcement of actions and responsibilities.

Such a structure requires a sound philosophical foundation upon which the policy and regulatory system can be developed in an integrated and coherent way. As already mentioned, the international consensus on principles such as sustainability and the precautionary approach in environmental protection and energy development provide such a foundation. If these normative principles are incorporated into domestic policy and government action at the national level, they provide strategic guidance for specific environmental legislation and sub-national policy and regulation of environmental protection and resource management. Under this structure, local government normally has the primary role in the implementation of higher-level policy and regulation through specific planning instruments containing rules and procedures for resource use, and for enforcement of the system. The model is broadly illustrated in Fig. 1 (Grinlinton 2013, p. 33):

As with any "model" the divisions are not mutually exclusive, and there is some overlap in the purpose and content of policy and regulation at the normative, strategic and operational levels.

At the *normative level* the structure integrates the normative principle of sustainability through recognition of value premises and priorities that underlie environmental management systems, including policy-making, planning and decision-making processes (Grinlinton 1992, pp. 5–7). The progressive development of international instruments such as the *Stockholm Declaration* (1972), the *World Conservation Strategy* in 1980, the *Brundtland Report* (1987) and the *Rio Declaration* (1992) are illustrations of developing normative global principles of environmental management. The system is dynamic as it accommodates reconsideration of higher-level objectives and re-definition of desired goals and values on an ongoing basis to accommodate developments in science and technology, and increasing understanding of natural processes and ecosystem dynamics. The successes and failures of policy, regulation and other management tools are also

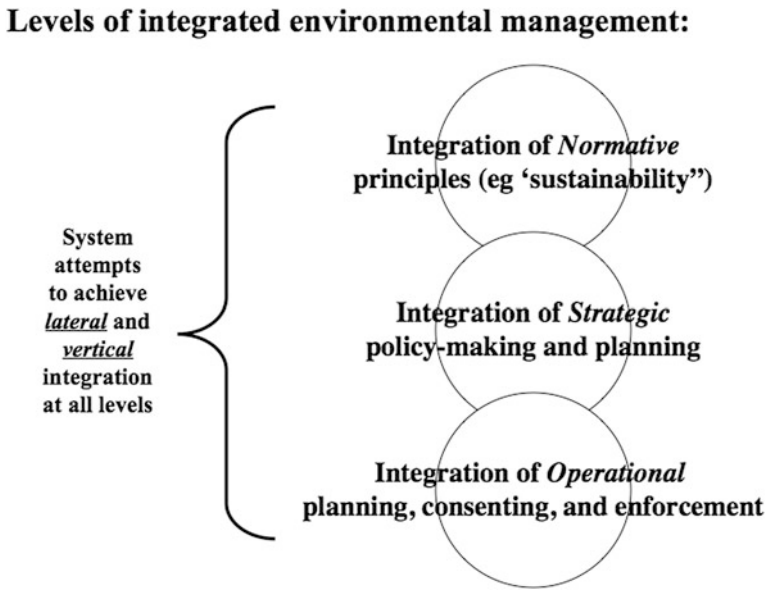

Fig. 1 Levels of Integrated Environmental Management (adapted from Grinlinton 2013, p. 33)

relevant in this context. As mentioned, the various levels of IEM overlap with the setting of objectives and policies at the national level for environmental management and natural resource use falling at the transition between normative and strategic levels of governance.

At the *strategic level* alternative goals and objectives, and the selection of the policy and regulatory means to achieve these, are addressed (Grinlinton 1992, pp. 8–11). This process may include administrative reform to provide for an integrated administrative and management framework to drive law reform and provide a management structure capable of implementing these elements. Legislation, policies and plans may be progressively introduced to provide the framework for implementation of the management structure. Macro-planning in the form of national policy statements and environmental standards, and sub-national policy instruments are appropriate, and fall at the transition between strategic governance and operational management.

At the *operational level* there is the allocation of specific responsibility for the various elements of resource management, usually to agencies of local government including regional and municipal levels (Grinlinton 1992, pp. 11–15). Micro-planning includes the preparation of regional and municipal planning instruments containing rules governing the use of natural resources such as water, land, and atmosphere, and providing procedures for obtaining consents to use those resources.

Such a model has been implemented in New Zealand over the last 25 years, and provides something of a case study for integrating sustainability into environmental governance, and specifically in relation to renewable energy development, at both institutional and regulatory levels.

3 Integrating Sustainability into Environmental Management and Natural Resource Development in New Zealand

New Zealand embarked on an ambitious process of environmental reform in the mid-1980s (Grinlinton 1995, pp. 14–23). The main features of this reform were:

- Institutional restructuring and rationalization of administrative governance through central and local government reform;
- Legislative reform providing for the management of land air and water through the new governance structure under the central guiding principle of "sustainable management of natural and physical resources" (RMA, Sect. 5).

A. Administrative governance reforms 1986–90

The following administrative reforms took place in New Zealand in the late 1980s to early 1990s (Palmer 2012, pp. 773–781):

- Establishment of a "Ministry for the Environment" under the Environment Act 1986;
- Creation of the Office of the Parliamentary Commissioner for the Environment (or "Environmental Ombudsman") under the same Act;
- Establishment of a Department of Conservation under the Conservation Act 1987 to manage New Zealand's 'conservation estate'; and
- Local government reform with the rationalization and restructuring of regional government and municipal authorities.

(i) *Central government restructuring*

The Environment Act 1986 established the Ministry for the Environment, and the separate Parliamentary Commissioner for the Environment (PCE), sometimes referred to as the "Environmental Ombudsman" (Environment Act 1986, Sect. 4).[4] The term "environment" was given an expansive meaning, encompassing ecosystems and their constituent parts, including all natural and physical resources, and the physical, social, economic, cultural and aesthetic aspects of an area

[4]The PCE was intended to be an independent "system guardian" for the environment responsible to Parliament rather than the Executive, and not subject to direction by a particular minister.

(Environment Act 1986, Sect. 2).[5] Further, the Act recognized in the management of natural and physical resources that a full and balanced account should be taken of the intrinsic values of ecosystems, all values placed by people on the quality of the environment, the rights of the Maori (the indigenous people of New Zealand), the sustainability of natural and physical resources, and the needs of future generations (Environment Act 1986, Preamble).

The Conservation Act 1987 established a new Department of Conservation, to have responsibility for administration of national parks and public (Crown) conservation lands. The Department has particular functions in advocating conservation and sustainable management of approximately 30 % of New Zealand's land area (Conservation Act 1987).[6]

(ii) *Local government restructuring*

Between 1988 and 1989, the Local Government Commission reviewed all existing local authorities, resulting in a substantial reduction of the number of public bodies covering 12 regions, and 74 districts. The geographic boundaries of the regions followed catchment areas, with the intent that comprehensive integrated management of water and soil conservation would be achieved. This biogeographical "catchment" approach reflects similar approaches in the EU under the Water Framework Directive (Directive 2000/60/EC), although as New Zealand is an island nation trans-border complications inherent in the EU measure do not arise.

Regional Councils were given responsibility for regional water planning, and to provide broad policy directions for land use planning, which would guide planning at the district level (Palmer 2012, pp. 36–47, 776–779).

B. **Law and policy reforms 1988–91**

In the late 1980s the newly created Ministry for the Environment developed and implemented a range of new policies and legislation. Underlying these environmental reforms was the desire to incorporate the normative principle of sustainability under a single integrated system of resource management (Palmer 2013 pp. 14–20; Grinlinton 2013 pp 26–39). The concept was consistent with the Brundtland Report of 1987 which gave general recognition to the objective of sustainable development recognizing intra-generational equity by redistribution of wealth, and

[5]The extent to which this "expansive" definition of environment influences the outcome when weighing sustainability concerns against other, more anthropocentric, interests is discussed below in 4. D.

[6]For further detail, see the Department of Conservation website: www.doc.govt.nz. Accessed 17 March 2015.

inter-generational equity through maintaining the viability of the ecosystem for the benefit of future generations. The primary mechanism[7] was the Resource Management Act 1991 ("RMA"), which came into force on 1 October 1991.

C. The Resource Management Act 1991

The RMA attempted to integrate into one statute the law relating to the management of land, air and water and replaced over 50 other Acts dealing with these matters. The overriding thrust of the legislation is to provide for integrated environmental and natural resource management (*Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593 (SC) at [9–11], [24] and [64] per Elias CJ, McGrath, Glazebrook and Arnold JJ).[8] The Act requires a holistic approach to planning and administration. It recognizes the balance required between environmental objectives, social and cultural objectives, and economic objectives.

(i) *The purpose and principles of the RMA*

The RMA has as its central purpose "…the sustainable management of natural and physical resources" (Sect. 5[1]). "Sustainable management" as defined in Sect. 5(2) contemplates enabling communities to provide for their social, economic and cultural wellbeing, while protecting the life-supporting capacity of the biosphere, and sustaining resources for the foreseeable needs of future generations:

> (2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—
>
> (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
> (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
> (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.
>
> (Emphasis added).

[7]Other enactments have been passed which also incorporate the sustainability principle, including: The Forests (Amendment) Act 1993 (incorporating sustainable management of indigenous forest on private land); the Fisheries Act 1996 (incorporating a "sustainable utilization" principle in management of commercial fisheries); and the Energy Efficiency and Conservation Act 2000 (sustainable use of energy).

[8]See also *Falkner v Gisborne District Council* [1995] 3 NZLR 622 at 632 (integrated holistic system); *Auckland Regional Council v North Shore City Council* [1995] 3 NZLR 18 (CA) at 22–23 (District Plans must not be inconsistent with regional policies); *Canterbury Regional Council v Banks Peninsula District Council* [1995] 3 NZLR 189 (CA) (integration of instruments).

All functions and decision-making carried out under the Act are guided by this purpose, and must actively promote it. In this sense the Act itself provides a powerful statement of government policy.

The "sustainable management" purpose is possibly unique in domestic legislation. However, the definition has given rise to some difficulties in interpretation. The balance between the "management purpose" of providing for the wellbeing of communities appears to be qualified by so-called ecological "bottom lines" in Sect. 5(2)(a)–(c). However, the courts have taken the view that the words should be given a wide meaning of purpose and principles, rather than strictly subjugating the management purpose to the ecological bottom lines.[9] The prevailing view has been stated by the Environment Court in *North Shore City Council v Auckland Regional Council* [1997] NZRMA 59 at 94 as follows:[10]

> The method of applying Sect. 5 then involves an *overall broad judgment* of whether a proposal would promote the sustainable management of natural and physical resources. That recognizes the Act has a single purpose …. Such a judgment allows for comparison of conflicting considerations at the scale or degree of them, and their relative significance or proportion in the final outcome. (italics added by author).

In that case the Environment Court approved restricting the metropolitan urban limit around Auckland City in a location to protect an estuary from pollution.

This pragmatic view of the statutory purpose of sustainable management sees the concept, purpose, or ethic of sustainable management as establishing the *prime objective* of the measure, rather than requiring a narrow legalistic approach to the particular words.

Section 5 of the RMA was recently examined in some detail by the Supreme Court in *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593 (*King Salmon*). The case concerned the effect of provisions in the *New Zealand Coastal Policy Statement 2010* ("NZCPS") in relation to aquaculture development in an area designated as being of outstanding natural character and having an outstanding natural landscape. The NZCPS is a statutory instrument (subordinate legislation) promulgated under the RMA. The appellants had applied for a change to the relevant planning instrument to reclassify salmon farming from a "prohibited activity" to a "discretionary activity" under the

[9]For example, in *New Zealand Rail Ltd v Marlborough District Council* [1994] NZRMA 70 at 86, Grieg J in the High Court upheld a consent to construct an export wharf in a natural part of a coastal area, as more important than conservation of the coastline.

[10]See also *New Zealand Rail Ltd v Marlborough District Council* [1994] NZRMA 70 (HC) at 86; *Royal Forest and Bird Protection Society of New Zealand Inc v Manuwatu-Wanganui Regional Council* [1996] NZRMA 241 (PT) at 269; *North Shore City Council v Auckland Regional Council* [1997] NZRMA 59 (EnvC) at 93–94 (the Environment Court uses the words "overall broad judgment" at 194); *Man O'War Station Ltd v Auckland Council* [2013] NZEnvC 233 at 35–47. See also: *Mangakahia Maori Komiti v Northland Region* [1996] NZRMA 193 (PT) at 215; *Genesis Power Ltd v Franklin District Council* [2005] NZRMA 541 (EnvC) at 228; and *Coromandel Watchdog of Hauraki Inc v Chief Executive of the Ministry of Economic Development* [2008] NZRMA 77 (CA) at 50.

RMA that may be given consent by the local authority if certain criteria are met. The Minister of Conservation had directed that a Board of Inquiry determine the application in the first instance.[11] The Board found that the proposed salmon farm would have significant adverse effects on the natural character and landscape of that area and that, as a consequence, policies 13(1)(a) and 15(a) of the NZCPS (which were concerned with preserving and protecting the coastal environment)[12] would not be complied with if the plan change were granted. Nevertheless, the Board considered that those policies, while carrying considerable weight, were not determinative. It decided that it was required to give effect to the NZCPS "as a whole", and applied the "overall broad judgment" approach relating to pt 2 of the RMA to grant the plan change (*King Salmon*, para [5]).

On appeal, the Supreme Court undertook a detailed analysis of the RMA, in particular pt 2 (purpose and principles) (*King Salmon*, paras [8]-[30]). It confirmed that the correct interpretation of "while" in Sect. 5(2) of the RMA, is that it means "at the same time as" (para [24(c)]). The Court further stated that the various elements of the Sect. 5(2) definition of sustainable management should be read as an "integrated whole", and that the elements in Sect. 5(2) (a)–(c) do not constitute a strict "environmental bottom line" in themselves (para [24(c)]). However, in considering the overall judgment approach, the Court noted that the approach could not be used to undermine or veto clear directive requirements of policies, plans and rules that have been prepared in accordance with the RMA (paras [106]-[149] for full discussion). The Court held that policies 13(1)(a) and 15(1)(a) and (b) of the NZCPS "provide something in the nature of a bottom line", and this was consistent with the definition of sustainable management in Sect. 5(2) of the RMA (para [132]). The Court disallowed the plan change as it did not give effect to policies 13 and 15 in the NZCPS.

The decision in *King Salmon* has much wider application than simply interpreting the NZCPS. The judgment provides useful clarification of the meaning of "sustainable management" as contained in Sect. 5 of the RMA, and its implementation through the hierarchy of policies and plans put in place by central and local government. It also confirms that such instruments may indeed contain limitations in the nature of "environmental bottom lines" that take effect in the planning and consenting process, and in the decisions of the courts on appeal.

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[11]Acting on the advice of the Environmental Protection Agency pursuant to Sect. 147(1) of the RMA.

[12]Department of Conservation, *New Zealand Coastal Policy Statement 2010* (November 2010), policy 13 (preservation of natural character) is expressed as: "To preserve the natural character of the coastal environment and to protect it from inappropriate subdivision, use and development: … (a) avoid adverse effects of activities on natural character in areas of the coastal environment with outstanding natural character." Policy 15 (natural features and natural landscapes) is expressed as: "To protect the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development: … (a) avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment …".

The RMA also includes a number of other "supplementary" purposes to guide policy and decision-makers. For example, matters in Sect. 6, RMA, include preservation of the coastal environment, wetlands lakes and rivers, and their margins, outstanding landscapes, and indigenous flora and fauna. Matters in Sect. 7, RMA, include the efficient use and development of natural and physical resources, the intrinsic values of ecosystems, the efficiency of the end use of energy, the effects of climate change and benefits of renewable energy, and maintenance and enhancement of environmental quality.

(ii) *The policy and planning structure under the RMA*

The RMA creates a vertically and laterally integrated structure for environmental management. It provides for central government policies, regional government policies and planning instruments, and territorial (city/municipal) level planning instruments. Each level of government has differing, but sometimes overlapping resource management responsibilities.

Vertical integration is achieved by the requirement that lower level plans and policies must "give effect to" higher level policies and plans (RMA, Sects. 67[2], [3], 75[3]).[13] Lateral integration is achieved by the requirement to consult with neighbouring councils, central government agencies, some NGOs and other interest groups regarding the effects on them of proposed policies and plans when preparing such instruments (RMA, Schedule 1, clause 3 [consultation]). Such consultation is guided by the purpose and principles in ss 5–8, RMA, and on the respective functions and responsibilities of those government agencies as provided for in Part 4 of the RMA.

Central government may promulgate "National Policy Statements" (NPSs) and "National Environmental Standards" (NESs) pertaining to various aspects of environmental protection and natural resource management.

Strategic planning and operational management of land air and water resources is largely devolved to regional councils and "territorial" authorities (Local Government Act 2002, Sect. 5[1] [meaning of "territorial authority"]; Palmer 2012 para [1.2]), with regional councils primarily responsible for managing water use and discharges into water, and district and city councils primarily responsible for land use.

(iii) *The "resource consent" permitting system*

People wishing to undertake activities with environmental effects are required to apply for "resource consents" (planning permissions).[14] Often a number of different

[13]For judicial discussion of the integration of policy and planning instruments see: *Application by the Canterbury Regional Council* [1995] NZRMA 110 at 111, and *North Shore City Council Application* [1995] NZRMA 74 at 86, where the planning Tribunal held that "regional council function must be able to impose some measure of restraint on management decisions made in exercise of territorial authority function".

[14]"Resource consents" include land use consents, subdivision consents, water permits, coastal permits and discharge permits under the RMA: Sects. 2, 87.

resource consents may be required for a particular activity. For example, renewable energy developments such as hydro, tidal and geothermal may require a range of planning permissions, including: land use permits for structures, transmission lines and access roads; and water use permits and discharge permits during the construction phase where there is water diversion, concentration, sedimentation or contamination, and for ongoing operation. Wind farms and solar developments would certainly require land use permits to operate, and possibly land use, water use and discharge permits during the construction phase. Department of Conservation approval may be required if the activity is on conservation land, or may have a significant effect on vegetation, wildlife and natural habitat.[15] Coastal permits may also be required from the Department of Conservation or Regional Council if the activity is in the coastal marine area (RMA, Sect. 12, 28, 56–58A, 89, 117, 119A). Marine consents may also be required for marine energy activities in the Exclusive Economic Zone or the extended continental shelf of New Zealand (Exclusive Economic Zone and Continental Shelf (Environment Effects) Act 2012, Sects. 3, 13).[16] The RMA provides detailed time schedules in Part 6 for processing resource consent applications.

The horizontally integrated nature of the system is illustrated by the resource consent application procedure. Applications for resource consents may be made on a publicly notified or non-notified basis in accordance with statutory notification criteria. The Council hears the application and, where notified, *any person* may make submissions. The decision must be made in accordance with the statutory purpose of "promoting sustainable management" and in accordance with the objectives and criteria in the Plan. The Plan, in turn, must not be inconsistent with any higher level regional or Government Policy statements, and is also subject to the sustainable management purpose.

Further horizontal integration of decision-making is providing for by "joint hearing committees" made up of representatives of the various consent authorities, and which can conduct hearings and grant all resource consents required in one hearing and decision-making process (see *AFFCO New Zealand Ltd v Far North District Council (2)* [1994] NZRMA 224, 233–234). Only when publicly notified are hearings for applications open to objections and submissions by any person without the need to have *locus standi* ('standing').[17]

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[15]Such activities and effects are governed under both the Conservation Act 1987 and the RMA: Conservation Act 1987, Part 3B, and esp. Sect. 17P.

[16]The purpose of this Act is "to promote the sustainable management of the natural resources of the exclusive economic zone and the continental shelf": Sect. 10(1).

[17]Traditionally under the common law, "standing" requires the litigant to have a property interest or some special interest greater than the general community. While "any person" can theoretically make submissions and objections to proposed plans, and also to resource consent applications that are publicly notified, in reality less than 5 % of resource consent applications are notified, so "open participation" is very limited. Criteria for notification/non-notification are contained in RMA: Sects. 95A-95G.

In considering an application, the consent authority must have regard to the purposes and objectives of the RMA under Part II of the Act as outlined earlier and any relevant NPSs or NESs, regional policies.

Decisions at the council level can be appealed to the specialist Environment Court by both the applicant and any objectors.[18] This appeal can be on both law and merits issues. The Environment Court is also bound by the sustainable management purpose of the Act. Further appeals to the High Court. Court of Appeal and, in certain cases to the Supreme Court, can only be on matters of law such as procedural compliance, jurisdiction, and correct application of legal rules and principles, as opposed to merits issues (RMA, Sects. 299, 308; Supreme Court Act 2003). Judicial review is another avenue for redress in the higher courts.

In summary, the planning and resource consent system works as follows:

- Regional Councils make 'Regional Plans' dealing with issues such as water use, coastal area, and major land use management;
- District/City Councils make 'District Plans' dealing with subdivision, developments and land uses;
- Regional and District Plans contain 'Rules' for use of land, air and water;
- People must normally apply for 'Resource Consents' for activities involving the use of, or impact of activities upon, land, water and air;
- A hearing committee representing the Council(s) who must grant consent considers the application(s) and makes a decision;
- If the application will have a significant environmental and/or social effect, there may be a public hearing and objections;
- The principle of "sustainable management" guides decision-making;
- The resource consent is then granted (or declined);
- Parties can appeal to the Environment Court de novo (from the beginning; afresh);
- Appeal can be made to the High Court (and higher courts) on legal issues only, or via an application for judicial review.

(iv) *Enforcement under the RMA regime*

Failure to comply with the RMA, plans and rules made under it, or the conditions of resource consents, may constitute offences under the Act. Penalties include the possibility of heavy fines of up to $NZ 300,000 for individuals or $600,000 for corporations. Imprisonment for up to 2 years is also an option for individuals and corporate officers. Liability for the most serious offences is strict, and the Act provides for vicarious corporate liability (RMA, Sects. 338–341). Most of the prosecutions under the Act relate to pollution of waterways and groundwater, or removal of protected indigenous vegetation. Although rare, some prosecutions have resulted in

[18]The Environment Court (previously the Planning Tribunal) is a specialist judicial body set up to arbitrate and adjudicate on environmental disputes (Part 11, RMA).

sentences of imprisonment (Grinlinton 2009).[19] The Act also provides for pre-hearing conferences (RMA Sects. 99, 267), caucusing of experts (Bollard 2007), other forms of alternative dispute resolution (ADR) (RMA, Sects. 268, 356; Clapshaw 2009), and the use of imaginative sentencing options such as community service.[20]

4 Applying IEM to Renewable Energy Development in New Zealand

A. Background

Renewable energy uptake has experienced a dramatic increase in the last decade. The *Renewables 2014 Global Status Report* (Ren21 2014) indicates that by the end of 2013 renewables comprised more than 26 % of global electric generating capacity, and supplied around 22 % of electricity generated (Ren21 2014, p. 25). While the majority source was hydropower, modern renewables such as wind and solar (both photovoltaic [PV] and thermal) have shown strong growth. The US, China, Germany, Spain, Italy, Turkey, Brazil, and India accounted for the majority of generation growth in 2013, and New Zealand led the growth in geothermal power generation (Ren21 2014, p. 16).

Renewable resources accounted for 38.2 % of New Zealand's primary energy supply, and over 75 % of electricity production in 2013 (NZ Govt. 2014, p. 50). This is the fourth highest proportion of renewable sources to non-renewable sources for electricity production in the OECD. Hydro power accounted for 54.5 %, geothermal 14.5 %, wind 4.8 % and bioenergy (and other sources) 1.5 % of New Zealand's electricity generation in 2013. Gas contributed 19.4 % and coal 5.3 % (NZ Govt. 2014, pp. 56). While much of the hydro generation is from dams that were built in the mid to latter part of the twentieth century and therefore were consented under less rigorous planning and environmental protection regimes,[21] recent activity has centred on geothermal and wind energy developments. Many such developments have had to obtain consent under the RMA and therefore the

[19]Examples include: *Franklin District Council v McCollum* Unreported, District Court, CRN 3057005960, 14 February 1994 (pig farmer sentenced to 6 months imprisonment for polluting a waterway); *R v Conway* [2005] NZRMA (sentence of 3 months for pollution of waterways with oil and fuel upheld).

[20]For example, in *Smith v Auckland City Council* [1996] NZRMA 274 a sentence of 6 months community service/periodic detention was imposed for mortally damaging a landmark tree as a political protest.

[21]The transitional provisions of the RMA provide, in most cases, "deemed" consent for existing water uses for hydro dams, but these expired after 10 years, after which time hydro operators had to obtain water permits under the RMA, and consent authorities were able to impose more stringent conditions of consent at that time if appropriate: RMA, Sect. 386 (transitional provisions for water permits, including for hydro dams). See also: Sects. 123 (duration of resource consents), 128–132 (revision of consents).

planning and consenting process has been subject to the sustainable management purpose of the Act.

B. Policy measures relevant to renewable energy development

New Zealand is an active participant in many international instruments relevant to environmental protection and climate change (NZ Govt. 2015).[22] It has also incorporated the international principle of sustainable development in a number of statutes as a statutory objective or purpose. Such measures are themselves a statement of policy reflecting normative principles such as sustainability at a national level. For example, Sect. 5 of the RMA, can be viewed as both a statement of government policy enshrined in legislation, as well as an operative provision with binding effect in the national and sub-national policy-making, planning and decision-making framework contained in that Act.

The RMA also provides for National Policy Statements and National Environmental Standards to be promulgated on various matters. These NPSs and NESs have the effect of subordinate legislation, and are therefore binding on central government, local government and on the courts. Between themselves, NPSs and NESs are at the same level of subordinate legislation although are used for different purposes. NPSs are more general guidance policy documents containing matters such as objectives and higher-level policies that are relevant to achieving the purpose of the Act.[23] NESs contain more quantified technical performance standards for matters such as contaminants, water and air quality, soil quality, and noise standards.[24]

In 2011 the *National Policy Statement on Renewable Electricity Generation* (NPSREG) came into force. This measure recognizes as "matters of national significance" (NPSREG, p. 4):

(a) the need to develop, operate, maintain and upgrade renewable electricity generation activities throughout New Zealand; and
(b) the benefits of renewable electricity generation.

The Policy requires decision-makers to recognize the benefits of renewable electricity generation activities and to facilitate their implementation where possible (NPSREG, pp. 5–6). It also specifically requires local authorities to incorporate—within 24 months of the measure—objectives, policies and methods in regional policies and plans, and in district plans, to increase the uptake of renewable energy generation from sources such as solar, hydro, wind, tidal, geothermal and biomass (NPSREG, Policies [E1]–[E4]). Provision for small and community-scale generation is also provided for (NPSREG, Policy [F]). In *Meridian Energy Ltd v Canterbury*

[22]For example, New Zealand was one of 185 developed and developing countries that adopted the Framework Convention on Climate Change at the Rio Earth Summit in 1992. New Zealand also ratified the Kyoto Protocol to the UNFCCC in December 2002. While New Zealand has withdrawn from the Kyoto commitment period from 2013–2020, it has agreed to remain bound to take its next emissions reduction commitment directly under the UNFCCC.

[23]RMA: Sect. 45(1).

[24]RMA: Sect. 43.

Regional Council [2013] NZEnvC 70, the Environment Court examined the effect of the NPSREG on the decision-making process for granting resource consents for activities that may impact upon renewable energy. In that case Meridian Energy—a major hydro generator—had appealed against the grant of a water permit by the Canterbury Regional Council to a vineyard owner for water off-take for irrigation purposes from Lake Aviemore which Meridian relied upon for its hydro generation. The hearing commissioners who granted the consent had not considered the NPSREG in their deliberations, and the Court gave the following clear guidance of the importance of the measure in the decision-making process (at paras [9–10]):

> [9] The NPSREG was gazette on 14 April 2011. The Commissioners' Decision is dated five months later, but does not refer to it. That is of concern because the NPSREG contains policies which should have been had regard to. [Section 104(1)(b)(iii), RMA]
>
> … The NPSREG makes the continued availability of the upper Waitaki water a matter to which particular regard should be had– first by the Hearing Commissioners, and now on appeal, by this court.
>
> [10] It is curious that the Hearing Commissioners did not refer to the NSPREG at all. As a matter of law it should have been had regard to. …[25]

Clearly the NPSREG contains policies and considerations that must be given effect to in policies and planning instruments of local authorities, by decision-makers determining resource consents, and by the courts in determining appeals.

C. Statutory measures relevant to renewable energy development

The RMA contains a number of sections that address renewable energy. Section 5 (2) refers to promoting resource efficiency, sustaining resources for future generations, and "safeguarding the life-supporting capacity of air, water, soil, and ecosystems". These elements generally favour renewable energy proposals even where there may be some negative effect on other environmental or amenity values. Section 6 sets out a number of "matters of national importance" that must be recognized and provided for in achieving the purpose of the Act. They include matters such as the protection of the natural character of the coastal environment, and the protection of outstanding natural features and landscapes from "inappropriate" development. In recent decisions the courts have stated that more localized landscape and amenity effects of renewable energy developments will often be subordinated to national and global considerations favouring renewable energy, which are implicit in the sustainable management purpose in Sect. 5.[26] This is not

[25]See also NPSREG, paras [11] and [18–20].

[26]See, for example, *Genesis Power Ltd v Franklin District Council* [2005] NZRMA 541 at [228], *Unison Networks Ltd v Hastings District Council* [2007] NZRMA 340, *Meridian Energy Ltd v Wellington City Council*, Environment Court W031/2007, 14 May 2007 (Project West Wind). *Meridian Energy Ltd v Central Otago District Council* [2011] 1 NZLR 482, *Mainpower New Zealand Ltd v Hurunui District Council* [2011] NZEnvC 384, [2012] NZEnvC 21. *Final Report and Decision of the Board of Inquiry into the Hauauru ma Raki Wind Farm and Infrastructure Connection to Grid* (13 May 2011) (application by Contact Energy Ltd). *Final Report and Decision of the Board of Inquiry into the Turitea Wind Farm Proposal* (6 September 2011) (application by Mighty River Power Ltd).

always the case with the Court having some discretion (albeit guided by the s 5 "sustainable management" purpose), which has resulted, in some cases, in local property rights or indigenous cultural sensitivities being prioritized over the broader national and global benefits of renewable energy.[27] In Sect. 7 of the RMA decision-makers are required inter alia to *have particular regard to*:

(b) the efficient use of natural and physical resources; and
(ba) the efficiency of the end use of energy; and
(i) the effects of climate change; and
(j) the benefits to be derived from the use and development of renewable energy.

These sections have also been applied to favour renewable energy developments over other land uses in a number of cases over the last decade.[28]

D. The wind energy cases

A precursor to the line of wind energy cases discussed below was the decision in *Environmental Defence Society Inc v Auckland Regional Council* [2002] NZRMA 492. The Court had to consider whether greenhouse gas emissions and New Zealand's obligations under the UNFCCC and Kyoto Protocol were relevant considerations when considering an application for an air discharge permit under the RMA for a gas-fired power station. Although not part of domestic law, the Court determined that such international obligations could be taken into account under Sect. 104 of the RMA (at para [28]):

> The weight we give to the instruments is dependent on the nature of New Zealand's obligations under them, and the extent to which New Zealand government policy has crystallized, so as to give an indication of how New Zealand's obligation under the instruments will be given effect in New Zealand law.

In 2004 the RMA was amended to limit the extent to which such international instruments may be taken into account by decision-makers when considering applications for activities resulting in discharges of GHGs.[29] Nevertheless a line of decisions, starting in 2005, have weighed such international obligations against the effects on property owners and communities of wind energy developments. In some case the international obligations under such instruments as the UNFCCC have influenced the outcome in favour of the development; while in others private property and cultural interests have prevailed (Grinlinton 2007).

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[27]See, for example, *Outstanding Landscape Protection Society v Hastings District Council*, unreported, Environment Court W24/07, 13 April 2007, where the Environment Court favoured the protection of Māori cultural values related to a ridgeline over the desirability of an extension to a windfarm.

[28]*Genesis Power Ltd v Franklin District Council* [2005] NZRMA 541 at 220–224, *Unison Networks Ltd v Hastings District Council* [2007] NZRMA 340 at 74, and *Meridian Energy Ltd v Wellington City Council*, Environment Court W031/2007, 14 May 2007 at 582.

[29]See discussion in *Greenpeace New Zealand v Northland Regional Council* [2007] NZRMA 87 at 39–57 per Williams J.

Genesis Power Ltd v Franklin District Council [2005] NZRMA 541 was an appeal against the refusal of the council to grant land use consent to construct and operate up to 18 wind turbines at a coastal site on the West Coast of the North Island of New Zealand. After a full examination of the evidence, and local objections from property owners and the proprietors of a horse-breeding operation, the Court upheld the appeal. In its decision it accepted that the proposal would have significant adverse effects on the natural character and landscape of the coastal environment contrary to Sect. 6 of the RMA, and those effects could not be mitigated. However, it noted that Sect. 6 was subordinate to the primary Sect. 5 purpose of sustainable management (para [55]), and this purpose would be best served by granting consent than refusing it. This was also supported by the various specific references to encouraging efficiency in the use of energy, addressing the effects of climate change, and the benefits of renewable energy in Sect. 7 of the RMA (para [228]):

> We find that the benefits of the proposal, when seen in the national context, outweigh the site-specific effects, and the effects on the local surrounding area. To grant consent would reflect the purpose of the Act as set out in Sect. 5.

Ultimately the development did not go ahead for economic reasons. The *Genesis* case was followed by *Unison Networks Ltd v Hastings District Council* [2007] NZRMA 340 which concerned appeals and cross-appeals by developers of two wind farm projects in a rural area on the East coast of the North Island of New Zealand. Approving modified consents for the developments, the court elevated the global and national objectives to reduce GHGs over the objections of property owners and local Māori—the latter objecting on cultural and spiritual grounds. The Court did, however, make the point that renewable energy generation would not always be favoured, stating (at para [82]):

> We make this decision on a site-specific basis. It may well be that other sites, perhaps for example more iconic in character, or closer to houses or clusters of population, will call for a different result. [Affirmed in *Unison Networks Ltd v Hastings District Council* [2011] NZRMA 394 (HC)]

This comment foreshadowed the decision in *Outstanding Landscape Protection Society Inc v Hastings District Council* (unreported, Environment Court W24/07, 13 April 2007) where objections by local Māori against granting consent to an extension of a windfarm along a ridge-line that had spiritual significance, were upheld. The court stated (at para [116]):

> Important as the issue of climate change and the use of renewable sources of energy unquestionably are, they cannot dominate all other values. The adverse effects of the proposal on what is undoubtedly an outstanding landscape, and its adverse effects on the relationship of Māori with this land and the values it has for them, clearly brings us to the conclusion that the tipping point in favour of other values has been reached.

Again, this case illustrates the discretion that the Courts have exercised to apply the overall judgment approach in balancing the many social, economic, cultural,

ecological and intergenerational factors—many of which are often in tension—that are included in the s 5, RMA, purpose of sustainable management.

The decision in *Meridian Energy Ltd v Wellington City Council* (unreported, Environment Court, Wellington W 31-07, 14 May 2007) followed a month later with the Court approving a 70 turbine wind farm development on the West Coast of the North Island near Wellington. This case had raised a storm of protest from local landowners based on many matters including noise effects, effects on vegetation and habitat, amenity and visual effects, recreation and public access, and heritage effects. In granting consent, albeit modified in some cases as to location of turbines, the Court stated (para [459]):

> [W]e accept that there are concerns about a good number of turbines on various adverse effect grounds. In our judgement however the benefits to be gained from the project in terms of the promotion of sustainable management of natural and physical resources in terms of Sect. 5 [RMA], as informed by Sect. 6 and Sect. 7 factors we have reviewed, outweigh those concerns in respect of the great majority of turbines.

In 2009 a major wind farm development (Project Hayes), comprising some 176 turbines to be erected along the iconic and largely unspoiled Lammermoor Range in Central Otago in the South Island of New Zealand, was declined by the Environment Court: *Maniototo Environmental Society Inc v Central Otago District Council* (unreported, Environment Court, Christchurch, C103/2009, 6 November 2009). The Court considered the development would have a major adverse visual impact, and held that the applicant had failed to conduct a thorough analysis to show alternative sites were not available (at para [757], per Judge Jackson summarising the Court's reasoning). Meridian Energy—a Crown-owned energy generation company—successfully appealed the decision to the High Court: *Meridian Energy Ltd v Central Otago District Council* [2011] 1 NZLR 482. While acknowledging that the availability of alternative sites could be considered by the decision-maker when assessing the application, the Court held that the applicant should not be required to undertake a full economic cost-benefit analysis of alternative sites (para [123]). Despite its success on appeal, Meridian Energy ultimately did not proceed with the development.

A number of other wind farm applications have gained consent, or modified consent, sometimes following appeals, or consideration by a Board of Inquiry.[30] In 2011 another major development of up to 168 turbines—the Hauauru Wind Farm Project—received approval despite objections from local landowners regarding visual amenity and detraction from landscape views, and objections based on the ecological effects of the development: see *Final Report and Decision of the Board of Inquiry into the Hauauru ma Raki Wind Farm and Infrastructure Connection to Grid* (13 May 2011). In this case local Māori groups had entered into environmental compensation side agreements with the developer to address their concerns. Local landowners did not receive financial compensation for detraction from their views.

[30]This is an alternative procedure for dealing with proposals of "national significance": see RMA, Part 6AA, and esp. Sect. 142(2)(a) and (3).

Many conditions were imposed in the consent, including measures to control sediment, dust, glare and noise, relocation of a bat colony, measures to address the impact on birds and terrestrial invertebrates, road and air safety, radio and TV interference avoidance, and cultural effects (see Volume 2, Conditions and Schedules).

Also in 2011 an application by Mainpower New Zealand Ltd to construct 67 turbines at Mt Cass in the central South Island high country was also successful despite objections on landscape and ecological grounds: *Mainpower New Zealand Ltd v Hurunui District Council* [2011] NZEnvC 384, and see [2012] NZEnvC 21. The Environment Court imposed a number of conditions to address those issues, including undertaking pest and weed control, and assisting regeneration of indigenous species ([2011] NZEnvC 384, paras [485–488] and attached Conditions).

In *Contact Energy Ltd v Manawatu-Wanganui Regional Council* [2011] NZRMA 155 the Environment Court approved a 52–58 turbine development on a farm in a relatively unique karst landscape. Objectors were concerned with adverse effects on water quality and supply due to construction effects, visual impact and the effects on a nearby horse stud. Again the positive benefits of renewable energy overrode the negative effects on property rights and amenity.

Also in 2011, consent was granted for 60 turbines in the Turitea Wind Farm development. Although the applicant had sought approval for 122 turbines, the Board of Inquiry reduced this by 50 % to reduce the adverse effects on an outstanding natural landscape, and to avoid excessive clearance of indigenous vegetation of high ecological value. The applicant and local Māori had also entered into a side agreement which provided various financial benefits: *Final Report and Decision of the Board of Inquiry into the Turitea Wind Farm Proposal* (6 September 2011).

Further developments have been approved near Wellington in the North Island (*Meridian Energy Ltd v Wellington City Council* [2011] NZEnvC 406), and Mt Cass in the central South Island (*Re Meridian Energy* [2013] NZEnvC 59).

One interesting paradox is that, although the RMA, and subordinate legislative instruments such as the NPSREG, require positive consideration in the planning and decision-making process for renewable energy developments, the converse does not apply. In *Genesis Power Ltd v Greenpeace New Zealand Inc* [2008] 1 NZLR 803 the Court of Appeal held that climate change issues may not be considered as a negative factor militating *against* applications for fossil fuel driven power stations (see paras [39–44] per William Young P (President of the Court)).

E. **Other renewable energy cases**

Several recent decisions for hydro, tidal and geothermal generation further highlight the integrated environmental management approach to renewable energy in New Zealand.

Although hydro generation has provided the backbone of New Zealand's electricity generation for many decades, and still provides the majority of generation, it is unlikely that any large-scale hydro development will take place in the

foreseeable future. There are a number of reasons for this including: the withdrawal of government from building and operating electricity generation schemes; the stricter limitations on environmental impact that flow from the RMA regime; the many demands placed on rivers and lakes by recreational and agricultural users; the establishment of a number of *Water Conservation Orders* under the RMA restricting damming or diversion of major rivers (RMA, Sects. 199–217; Nolan 2015 paras [8.56]–[8.80]); and Māori claims to water bodies (Palmer and Grinlinton 2014, pp. 257–258).

The one major development to be proposed since the RMA was enacted was "Project Aqua" involving several hydro dams on a major South Island river system which would take 73 % of the water flow. This met with substantial opposition from farmers who took water for irrigation, recreational users and local Māori. The Government, under the Resource Management (Waitaki Catchment) Amendment Act 2004, set up a Board of Inquiry which recommended a scheme of allocation between competing users, leaving significantly less for hydro generation. Although the hydro scheme did not proceed it did lead to a more integrated approach to fresh water management and the promulgation under the RMA of a National Policy Statement on Freshwater in 2011.[31] It is likely that in the future only smaller hydro developments—of which there is considerable potential—will be successful in the resource consent approval process.

More recently a proposal was floated to harness the energy from the tidal flow of water in and out of the Kaipara Harbour on the West Coast of the North Island north of Auckland. The applicants Crest Energy Ltd wished to place 200 × 1 MW turbines on the seabed in the main channel at the mouth of the harbour. Objectors included fishermen concerned with effects on spawning grounds and net obstruction, environmentalists concerned about the effects on rare species of dolphin and other marine life, and local Māori concerned with both ecological and cultural effects. An interim decision was issued by the Environment Court in 2011 (*Crest Energy Kaipara Ltd v Northland Regional Council* (unreported), EnvC Auckland A 132/2009, 22 December 2009; Wright and Leary 2011). A final decision granting a full 35 year consent term was given in 2011 (*Crest Energy Kaipara Ltd v Northland Regional Council* [2011] NZRMA 420), but the development remains on indefinite hold mainly due to technical and economic factors. However, the application and appeal process further illustrates the integrated system of environmental management incorporating consideration by central and local government, and accommodating objections and submissions from interested parties, all under the guiding principle of sustainable management.

Geothermal energy generation has experienced very significant growth in recent years, with New Zealand in 2013 having the highest growth globally in the utilization of this resource (NZ Govt. 2014, p 50). In 2013 almost 15 % of New Zealand's electricity was provided from geothermal generation, and this figure has

[31]See: www.mfe.govt.nz. Accessed 17 March 2015. The NPS focuses on best use of fresh water and prevention of overallocation.

been growing by around 2–4 % per annum in recent years (NZ Govt. 2014, pp 55–56). The *Te Mihi* geothermal proposal in 2008 provides a good example of the application of the IEM approach for this type of renewable energy. The application was dealt with by a Board of Inquiry due to its national significance. A number of matters were considered, including land stability, subsidence, discharge of contaminants into the air, and reinjection of surplus water and steam. The project was approved in 2008 on a similar basis to the wind energy cases already discussed; i.e. that the project would contribute to more sustainable and efficient use of energy and address climate change issues in line with New Zealand's commitments under the UNFCCC and the Kyoto Protocol: see *Final Report and Decision of the Board of Inquiry Te Mihi Geothermal Power Station Proposal* (3 September 2008).[32] The 250 MW *Tauhara 2* geothermal development project being developed by Contact Energy and the Tauhara Moana Trust in the central North Island was also approved in December 2010: *Final Report and Decision of the Board of Inquiry into the Tauhara II Geothermal Development Project* (10 December 2010).[33]

Geothermal energy development has also involved joint development between generating companies and local Māori. The *Ohaaki* station was built on land leased from local Māori, and also utilizes surplus energy for heating for an adjacent glasshouse horticultural operation. Although the station's electricity production has not met original expectations, it does provide an example of cooperative developments integrating local communities and indigenous groups in the business side of the development (Waikato Regional Council 2015). The *Tauhara 2* development is also a cooperative venture with a local Māori landowning trust.

5 Conclusions and Implications for Sustainable Development

A. Conclusions

Effective environmental governance requires an integrated system of environmental and natural resource management. Integration must occur at a number of levels. First, and probably foremost, the system must have strong normative guiding principles. The sustainability principle provides this. Secondly, these principles must be fully integrated into every level of administration, policy-making, regulation and implementation of the system. This may require significant reform of governance and administration organs. Thirdly, the system itself must be part of an

[32]The station is sited 5 km west of the 1958 Wairakei station which will in time be phased out of production (except for an existing binary station commissioned in 2005): http://www.mfe.govt.nz/rma/call-in-temihi/. Accessed 17 March 2015.

[33]See: http://www.epa.govt.nz/Publications/thii-boi-report-vol-01.pdf (vol 1), and http://www.epa.govt.nz/Publications/thii-boi-report-vol-02.pdf (vol 2). Accessed 17 March 2015.

integrated environmental regulatory and management structure reflecting the interrelatedness of all ecological elements within the biosphere.

New Zealand has implemented such a system. Integration of administrative structures has occurred with restructuring of environmental, conservation and natural resource management functions between central and local government. Integration of environmental and resource legislation has also occurred with environmental resource management policy-making, planning and decision-making now largely under a unified legislative regime. The RMA, while not without some flaws, provides a useful example of integrated environmental and natural resource management based on, and guided by, its sustainable management purpose.

Renewable energy developments are implemented through rules in planning instruments, and the grant of resource consents (planning permissions) by local authorities allocating rights in the necessary natural resources (e.g., land, water, geothermal steam). Vertical integration is provided by the overarching legislative purpose in the RMA of sustainable management of natural and physical resources, which permeates the entire policy, planning and consenting process at central and local government levels, and through the appeals process in the Environment Court. Policies promulgated under the RMA (such as the NPSREG) also guide the contents of plans and the decision-making process, and regional and district plans contain the criteria and rules that govern the grant of resource consents. Horizontal integration is provided by requirements to consult with neighbouring authorities and government agencies when preparing policies and plans, and with the joint hearing approach that allows combined decision-making on related consent applications when consents are required from different agencies. Broad rights of public participation in policy and plan preparation, and in consent applications, allow further integration of the interests of other stakeholders and interested parties.

There are of course some failings in the system, and these include (Grinlinton 2013, pp 39–46):

- A lack of coordinated planning and policy-making at local government level;
- Lack of detailed requirements for environmental impact assessment and independent auditing;
- Limitations on full public participation in resource consent hearings;
- Variable and light-handed enforcement by local authorities for breaches of the RMA or conditions in resource consents. Private citizens and environmental organizations are discouraged from bringing enforcement actions because of the risk of large costs and damages awards if unsuccessful.

The broad discretion allowed decision-makers and courts—albeit within the boundaries of the sustainable management purpose and principles in ss 5–8, RMA, and polices and rules in plans—may be a failing if inappropriately exercised. On the other hand the flexibility provided by such discretion is a strength if appropriately used to advance sustainable management of natural and physical resources. There are of course examples both ways, but on balance it is this writer's view that the advantages outweigh the disadvantages especially if the focus of the

decision-makers is on "effects" of activities rather than the rigid "zoning" approach of traditional town planning.

Another criticism may be the lack of specific protections for species and other elements of the biosphere at the national level in the Act itself. The RMA was not intended to provide absolute prescriptive critical limits for species and natural resources. Rather it provides a framework for establishing national policies and standards, and regional and local limits and rules that may deal with those matters in more detail. Other legislation also provides specific protection for species and elements of the biosphere (e.g., Conservation Act 1987, Biosecurity Act 1993, Trade in Endangered Species Act 1989, Wildlife Act 1953, Fisheries Act 1996).

B. **Implications for Sustainable Development**

This chapter argues that an effective and workable theoretical IEM model incorporating sustainable management of natural and physical resources can be implemented domestically by states through structural governance change, and law reform. Such a system can effectively promote and facilitate greater renewable energy development, although the trans-boundary implications must be considered for countries that share land borders, or have close maritime borders, with other countries.

Despite some shortcomings noted above, the New Zealand environmental management regime provides a useful IEM model, not only to encourage greater uptake of renewable energy, but as a system to facilitate the sustainable management of natural and physical resources generally. In many ways New Zealand is a fortunate country. It has a secure and effective democratic structure, a capable and impartial judiciary, a reasonably affluent and well-educated society, a low level of corruption, and a sparsely populated and unspoilt natural environment. As these characteristics are often lacking in other jurisdictions the extent to which the IEM structure may be applied elsewhere will depend upon many factors, including:

- The political and governmental structure—both central and local government levels;
- The ability to implement coherent, comprehensive and integrated legislation and regulation;
- Clear allocation of responsibilities and the vesting of appropriate powers of regulation and enforcement in central and local government environmental and resource management agencies;
- Strong leadership and the impartial and effective exercise of those functions and powers;
- The expertise and independence of the legal profession and the judiciary;
- The level of consultation and participation allowed to public and private agencies, private individuals, landowners and developers;
- Availability of full information on the state of the environment when making policies, plans or decisions of specific developments; and
- The ability to consider cumulative and "cocktail" effects of activities in any decision-making processes.

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