ADAPTING TO CLIMATE CHANGE: THE IMPLICATIONS OF SPECIES MOVEMENT FOR NEW ZEALAND ENVIRONMENTAL LAW

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ABBREVIATIONS

CA	Conservation Act 1987
CBD	Convention on Biodiversity
CMP	Conservation Management Plan
CMS	Conservation Management Strategy
EEZ	Exclusive Economic Zone
DoC	Department of Conservation
FA	Fisheries Act 1996
GCP	General Conservation Policy
GMP	General Management Policy
ICPWCNH	Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage
IPCC	International Panel of Climate Change
LA	Local Authority (including regional, district, city, and unitary councils)
MfE	Minister for the Environment
MoC	Minister of Conservation
NPS	National Policy Statement
NZBS	New Zealand Biodiversity Strategy
NZCPS	New Zealand Coastal Policy Statement
PNAP	Protected Natural Areas Programme
PWA	Public Works Act 1981
RA	Reserves Act 1977
RMA	Resource Management Act 1991
SNA	Significant Natural Area
TTWMA	Te Ture Whenua Maori Act 1993
UNFCCC	United Nations Framework on Climate Change
UNCLOS	United Nations Common Laws of the Sea
UNESCO	United Nations Educational, Scientific, and Cultural Organisation
WA	Wildlife Act 1953
WHC	Convention Concerning the Protection of the World Cultural and Natural Heritage

CHAPTER I - BACKGROUND AND INTRODUCTION

1. Impetus behind the topic

New Zealand has a very high degree of endemism; all frogs and reptiles, over 90% of insects, approximately 80% of plants, and 25% of birds are found only in New Zealand.[1] Further, New Zealand possesses 80,000 species of native animals, plants, and fungi, 20,337 of which are land based animals and 12,637 are marine animals.[2] In 1997 The State of New Zealand's Environment Report[3] concluded that "biodiversity decline is New Zealand's most pervasive environmental issue". In 2007 it was recognised that "the task of halting biodiversity loss is still a challenge for New Zealand today, as it was in 1997"[4] and that the "attention is [now] also likely to focus on the impacts of climate change on our native biodiversity".[5] Although 44% of New Zealand's land area is covered by native vegetation, most of this is in hill country and alpine areas.[6] The North Island and South Island lowlands have lost 95.8% and 92% of their original native land cover respectively.[7] Although 35% of New Zealand is legally protected, it is recognised that New Zealand's lowlands are among New Zealand's

[1] Ministry for the Environment (2007) *Environment New Zealand 2007* (Wellington, New Zealand) p. 351.

[2] Supra note 1, p. 352.

[3] Ministry for the Environment (1997) *The State of New Zealand's Environment 1997* (Wellington, New Zealand) p. 6.

[4] Supra note 1, p. 399.

[5] Supra note 1, p. 399.

[6] Supra note 1, p. 352.

[7] Only 21.4% and 5.4% of this remaining native land is legally protected. In contrast the Central Mountains have lost only 6.7% and the Southern Alps only 1% of their native land cover, with 76.4% and 94.2%, of the remaining land legally protected, respectively (Supra note 1, p. 364.)

most threatened habitats and "remain underrepresented in legal protection" with "climate change likely to reinforce current efforts to protect native vegetation".[8]

The Fourth Assessment Report of IPCC has confirmed that climate change will bring changes to both marine and terrestrial biological systems.[9] This will include temperature increases on land and in the water, precipitation increases or decreases on land, and chemical changes to water.[10] The report points out that most plants and animals can reproduce, grow, and survive only within specific climatic conditions. Thus, if these conditions change beyond their tolerances, species will shift their range boundaries to find new territories, which accommodate their tolerance and threshold levels.[11] However, this natural reaction to climate change will be severely hindered by habitat fragmentation, inflexible boundaries of protected areas, and competing land use interests.[12] To add to the problem, the extents of these shifts vary from species to species, leading the need for individual species research and monitoring.[13] It must also not be forgotten that there are many other non-climate forces, such as pollution, pests, and natural disasters, which will also affect species and compound the issue further.[14]

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[8] Supra note 1, p. 399.

[9] Rosenzweig, C., Casassa, G., Karoly, D. J., Imeson, A., Liu, C., Menzel, A., Rawlins, S., Root, T. L., Seguin, B., Tryjanowski, P., (2007) Assessment of observed changes and responses in natural and managed systems *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Parry, M. L., Canziani, O. F., Palutikof, J. P., van der Linden, P. J. and Hanson, C. E., Eds. (Cambridge University Press, Cambridge, UK), pp. 79-131 at pp. 94 and 98.

[10] Supra note 9, pp. 94 and 98.

[11] Supra note 9, p. 98. For example, in the Pacific Ocean significant shifts in the composition of inter-tidal communities in response to warmer temperatures have been found (Supra note 9, p. 94).

[12] Supra note 9, p. 101.

[13] Supra note 9, p. 101.

[14] The IPPC Report states that the change in climate will also contribute to an increase of invasive pests and further habitat fragmentation (Supra note 9, p. 99). This issue is recognized in New Zealand; for example see Graeme, A., (2008) A change in the weather *Forest & Bird Magazine* 328, pp. 42-43, where it is recognised that the moth plant from the top half of the North Island is slowly spreading down south as the weather warms.

The IPCC Fourth Assessment Report recognises that New Zealand's endemic species are at risk from climate change as they are "restricted in geographical and climatic range".[15] This is predicted to cause a particular problem in New Zealand's lowlands where reserved areas are small, isolated, and fragmented, as well as in New Zealand's coastal areas and freshwater wetlands.[16] Although there is "little research on the impacts of climate change on New Zealand species or natural ecosystems…major changes are expected in all vegetation communities".[17]

2. Focus of the Dissertation

Given the above considerations, this dissertation will focus mainly on the habitats of endemic terrestrial wildlife and coastal marine mammals with a particular focus on endemic birds in New Zealand's lowlands and marine mammals within New Zealand's EEZ. Both species tend to be protected in smaller, isolated, and fragmented reserves and sanctuaries. Species movement in alpine zones and national parks is considered less of a problem. In alpine areas species are likely to move upwards, where their habitats are still protected. Once they run out of room, the only practical solution is ex-situ conservation.[18] National Parks tend to cover large areas and are less affected by fragmentation and development.

3. Case Studies

Specific case studies of the North Island Brown Kiwi and the South Island Hector's Dolphin will be discussed. These two species have been selected for various reasons: First, there is considerably more data available on these two endemic species than others. Secondly, they

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[15] Hennessy, K., Fitzharris, B., Bates, B.C., Harvey, N., Howden, S.M., Hughes, L., Salinger, J. and Warrick, R., (2007) Australia and New Zealand. *Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Parry, M. L., Canziani, O. F., Palutikof, J. P., van der Linden, P. J. and Hanson, C. E., Eds. (Cambridge University Press, Cambridge, UK), pp. 507-540 at p. 517.

[16] Supra note 15, p. 517.

[17] Supra note 15, p. 517.

[18] Hansford, D., (2007) Withering Heights *Forest & Bird Magazine* 325, pp. 14-17.

are recognised internationally as being endangered species and are endemic to New Zealand.[19] Thirdly, both are likely to be affected by climate change; in the case of the Kiwi a shift southwards to more densely populated areas has been anticipated;[20] dolphins, being marine animals, have also been identified as being potentially affected by climate change including shifts in species ranges.[21] Fourthly, the Kiwi provides a good example of endemic animals which tend to need large areas to exist,[22] but can also get by in a fragmented landscape as they move surprisingly long distances between forest remnants in order to extend their habitats so long as dispersal corridors are managed appropriately.[23] Hector's dolphins are more restricted in their range; however seasonal movements mean they also move outside their protected areas.[24] Fifthly, the two species illustrate the different types of habitat protection well; while Kiwis are currently protected by DoC, LAs and private organisation initiatives in various types of protected areas, the Hector's Dolphin is primarily protected by the DoC managed Banks Peninsula Marine Mammal Sanctuary. And lastly, the two species provide a good background to the Canterbury and Northland areas, which will be the main regional focus of this dissertation. Northland boasts a relatively large Kiwi population within a fragmented landscape, with many different efforts to preserve this status. Canterbury is the home of the Banks Peninsula Marine Mammal Sanctuary. Canterbury also provides good examples of various habitat protection initiatives (albeit unrelated to dolphins or kiwis) on behalf of the

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[19] International Union for the Conservation of Nature Red List <www.iucnredlist.org> accessed 09/08/08.

[20] Pierce, R. J., et al (2006) *Sustainable Management of Brown Kiwi and other Threatened Birds in Northland*, Report prepared for the Department of Conservation and New Zealand Landcare Trust (Whangarei, New Zealand), p. 16.

[21] Department of Conservation and Ministry of Fisheries (2007) *Hector's and Maui's Dolphin Draft Threat Management Plan* (Wellington, New Zealand), p. 30.

[22] Each bird needs approximately 2.5 hectares (Potter, M., (1990) Movement of North Island Brown Kiwi (*Apteryx australis mantelli*) between forest remnants *The New Zealand Journal of Ecology* 14, pp. 17-24 at p. 18).

[23] Kiwis have been found to move up to 330m in 10mins, walking over 100 metres of uncovered farm land to get to their destination (supra note 22, p. 19).

[24] Dawson, S. and Slooten, E., (2006) Offshore distribution of Hector's dolphins at Banks Peninsula, New Zealand: is the Banks Peninsula Marine Mammal sanctuary large enough? *New Zealand Journal of Marine and Freshwater Research* 40, pp. 333-343, at p. 334.

Regional Council to protect the few remaining areas of indigenous vegetation in the much cleared lowlands.

4. Dissertation outline and recommendations for possible solutions

This dissertation will first look at New Zealand's obligation to protect biodiversity from the impacts of climate change. It will then move on to the existing law already in place to protect and preserve habitats of indigenous species under both the RMA and conservation estate legislative schemes.

The general legislative and policy approaches, which will be needed to cater for the problem, as well as the extent to which these approaches already exist in New Zealand's environmental law, will be examined. Any changes, which may be required, will also be discussed. The issue of species movement due to climate change has been recognised by the international community[25] as well as by individual states[26] including New Zealand.[27] The literature, ranging from the scientific community, to legal academics, to government departments, shows a consensus that general policy and legislative changes are required to cater for the issue. Due to the uncertainty of both climate change and species movement, these changes concern the

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[25] For example see: The United Nations Educational, Scientific, and Cultural Organisation and the Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage (2007) *Policy Document on the Impact of Climate Change on World Heritage* (46 WCH-07/16.GA/10); (2006) *Report on Predicting and Managing the Effects of Climate Change on World Heritage and Strategy to Assist States Parties to the [World Heritage] Convention to Implement Appropriate Management Response* (WHC-06/30.COM/7.1) <http://whc.unesco.org> accessed 16/09/08.

[26] For example see: Department of Environment and Climate Change New South Whales (2007-2008) *Adaptation Strategy For Climate Change - Impacts on Biodiversity* (New South Whales, Australia); United Kingdom Royal Society for the Protection of Birds (2007) *Climate Change Wildlife and Adaptation Report 2007* (United Kingdom); Malitz, G.P., Scholes, R.J., Erasmus, B. and Letsoalo, A. (2006) Adapting Conservation Strategies to Accommodate Impacts of Climate Change in Southern Africa *Assessments of Impacts and Adaptations to Climate Change (AIACC) Working Paper No. 35* (South Africa) <www.aiccproject.org> accessed 12/04/08.

[27] McGlone, M. (2001) *Linkages between Climate Change and Biodiversity in New Zealand,* Landcare Research Contract Report prepared for the Ministry for the Environment (Lincoln, New Zealand); Warnock, C. and Wheen, N., (2007) Climate Change, Wildlife Movement and the Law: A Case Study from New Zealand *Forthcoming in Commonwealth Law Bulletin* 34(3), pp. 527-550.

need for a pre-cautionary, futuristic and integrated approach in decision making.[28] Further, to ensure the relevant land is being protected there needs to be active monitoring and research to enable identification of the suitable areas so these can be adequately protected and prepared in time for their anticipated new inhabitants.

In addition to these general policy recommendations there is also clear consensus that new areas need to be established and managed for conservation purposes.[29] These new areas will serve two purposes: First they will provide new habitats for the moving species (these habitats will from now on be referred to as 'potential future habitats'); and secondly, they can also function as connectivity corridors to allow the species to move from the old to the new habitat.

Preferably species will move from publicly owned land onto publicly owned land. Unfortunately, it is also possible that species will move from publicly owned land, where they are protected, onto private land. This will prove a more contentious issue. However most commentators and policy makers agree that biodiversity conservation cannot be solely achieved through formally set aside conservation areas owned by the government, but rather 'off-reserve conservation' or 'matrix conservation' on private land also needs to be achieved.[30] The mechanisms in place to allow for more areas to be managed for conservation purposes will be discussed. In the case of private land, the landowner must be willing and accepting in giving part of his land to be managed for species habitat protection. This will be a major obstacle if there are no incentives available for the landholder to do this.[31] The type of incentives needed to provide adequate protection for potential future habitats and the possibility to provide for these incentives under the existing law will be examined.

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[28] Supra notes 25, 26, and 27.

[29] Supra notes 25, 26, and 27.

[30] Supra notes 25, 26, and 27. See also Farrier, D., (1995) Conserving Biodiversity on Private Land: Incentives for Management or Compensation for Lost Expectations? *Harvard Environmental Law Review* 19, pp. 303-408; Cocklin, C., and Doorman, P., (1994) Ecosystem Protection & Management in New Zealand: A Private Law Perspective *Applied Geography* 14(3), pp. 244-281.

[31] Supra note 30.

CHAPTER II - INTERNATIONAL RESPONSE & NEW ZEALAND'S OBLIGATION TO ACT

There are many reasons given as to why mankind should preserve biodiversity. The most common rationales have a utilitarian or instrumental foundation, arguing that biodiversity should be preserved due to its potential material values.[32] These are the type of arguments most commonly used as a legal justification for preserving biodiversity.[33] As well as utilitarian reasoning, there are also non-utilitarian rationales of preserving biodiversity, centring around inherent values. According to these, biodiversity has value in itself which is not dependant on any uses it may have to humans.[34]

[32] For example see: Carins, M.A. and Lackey, R.T., (1992) Biodiversity and Management of Natural Resources: The Issues *National Health and Environmental Effects Research Laboratory and United States Environmental Protection Agency* (Oregon, United States of America), <http://oregonstate.edu/dept/fw/lackey/Recent Publications.html> accessed 29/06/08, states that preserving biodiversity is commercially and economically beneficial as it provides food, industrial products, fuels and medicines. Further, there is a strong emphasis on the potential to find new material values that will contribute to these commercial values, with a high percentage of the world's biodiversity yet to be discovered; see also Randall, A., (1994) Thinking about Biodiversity *Biodiversity and Landscape: A Paradox of Humanity,* Chung Ham, K. and Weaver, R.D., Eds. (Cambridge University Press, Cambridge, UK) pp. 271-287 states that biodiversity adds the amenity value in providing for human enjoyment through aesthetic and recreational pleasure. Biodiversity also adds to the ecosystem support system, for example, through the elimination of waste from water by wetlands, or from the air by forests; See also *Environment New Zealand 2007 Report* (Supra note 1, p. 351), which states that: "New Zealand's ecological biodiversity performs a number of important services: our ecosystems provide clean air and water, help decompose wastes and recycle nutrients, maintain healthy soils, aid pollination, regulate local climates, and reduce flooding. These ecosystem services help sustain the country's primary production – farming, forestry, viticulture, and horticulture…Tourism in New Zealand depends largely on the conservation of our ecosystems".

[33] For example see: *Tennesse Valley Authority v Hiriam G Hill Jnr. et a*l 437 U.S. 153, 98 S.Ct 2279 and National *Association of Home Builders v Babbit* (1997) 130 F.3d 1041. However, it has been recognised that there is no scientific basis upon which to justify biodiversity conservation (see Dawson, F., (2004) Analysing the goals of biodiversity conservation: scientific, policy and legal perspectives, *Environmental & Planning Journal* 21(6) pp. 6-26, at pp. 12 and 15).

[34] Taylor, P. W., (1986) *Respect for nature* (Princeton University Press, Princeton, NJ). Scientists do not tend to suggest a reason for conserving biodiversity for its own sake (Dawson, F., (2004) supra note 33, p. 11), however it is recognised in law, for example under the Resource Management Act 1991, s 7 (d).

However, New Zealand also has an obligation under international law to protect and preserve biodiversity, in particular to provide for biodiversity under its general obligation in preparing to adapt to climate change.

The United Nations Framework Convention for Climate Change UNFCCC[35] was the first international convention to recognise Climate Change as global problem effected mainly by excessive human emission of greenhouse gases. As a party to the Convention, New Zealand agreed to not only mitigate climate change by stabilising its "greenhouse gas concentrations in the atmosphere" [36] but also to prepare in adapting to the impacts of climate change through cooperation.[37]

New Zealand has also ratified the CBD.[38] Under this Convention New Zealand has agreed, as far as possible and as appropriate, to "establish a system of protected areas…to conserve biological diversity," as well as guidelines for their "selection, establishment, and management". Further, under the CBD New Zealand must "regulate or manage biological resources important for the conservation of biological diversity *whether within or outside protected areas"* to ensure their conservation and sustainable use, as well as to "promote environmentally sound and sustainable development in *areas adjacent to protected areas with a view of furthering protection of these areas*", and to "promote the protection of…natural habitats and the maintenance of viable populations of species in *their natural surroundings"*. New Zealand must also "develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations".[39] Under the CBD *in-situ* protection of biodiversity is to be preferred over *ex-situ* protection.[40]

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[35] United Nations Framework for Climate Change (1992) *I. L. M.,* 31, p 851, in force 21 March 1994.

[36] Supra note 35, Article 2.

[37] Supra note 35, Article 4 (1)(e).

[38] Convention on Biodiversity (1992) *I. L. M.,* 31, p 818, in force 29 December 1993.

[39] Supra note 38, Article 8 (a)(b)(c)(d)(e) and (k) (own emphasis added).

[40] Supra note 38, Article 9 and preamble.

In order to achieve these purposes, New Zealand must, as far as possible and as appropriate, "identify processes…which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity"[41] and monitor these effects and regulate or manage the relevant process.[42] This language is clearly broad enough to include climate change processes.

In relation to marine mammals, New Zealand, as a party to UNCLOS[43], has the sovereign right to "explore, exploit, conserve, and manage" natural resources within its EEZ.[44] However, it must also "ensure through proper conservation and management measures" that the resource is not endangered by over exploitation.[45] These resources include all living resources such as dolphins.[46] Further, nothing in the convention prevents a state from "prohibiting, limiting, or regulating" the exploitation of marine mammals more strictly than laid out in the Convention.[47] Arguably this would especially be the case where a marine mammal, such as the Hector's Dolphin, is both an endemic and endangered species.

These conventions read together, in particular the CBD and the FCCC, bestow an obligation on New Zealand to;

> "identify the likely impacts of climate change for biodiversity, and to include in its legislation and guidelines for the selection and management of conservation areas objectives, criteria, measure and mechanisms that will promote the protection of wildlife in situ and ensure the conservation and sustainable use of biodiversity in light

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[41] Supra note 38, Article 7 (c).

[42] Supra note 38, Article 7 (c) and Article 8 (l).

[43] United Nations Convention on the Law of the Sea (1982) *I.L.M.,* 21, p. 1261, in force 16 November 1994.

[44] Supra note 43, Article 56(1)(a). The EEZ extends up to 200 nautical miles out from the coast (supra note 43, Article 57).

[45] Supra note 43, Article 61(2).

[46] Supra note 43, Article 56.

[47] Supra note 43, Article 61.

of those identified likely impacts" as part of its preparations to adapt to climate change.[48]

While the particular impact of species distribution shifts has not been expressly identified by these international conventions, attention to the climate change issue is growing within the CBD framework as well as other conventions regarding conservation of natural resources. In 2000, the CBD Conference of the Parties acknowledged the impacts of climate change on both terrestrial and marine biodiversity and ecosystems, especially on coral reefs.[49]

UNESCO and ICPWCNH recently released a Policy Document on the Impact of Climate Change on World Heritage[50] under the WHC.[51] This Policy Statement follows a Report by the ICPWCNH on "predicting and managing the effects of climate change on World Heritage" and a strategy to "assist state parties to the [World Heritage] Convention to implement appropriate management responses".[52] All the above documents specifically recognise the impact of climate change on terrestrial biodiversity with regard to range distributions[53] and

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[48] Warnock, C. and Wheen, N., (2008) Climate Change, Wildlife Movement and the Law: a Case study from New Zealand *Forthcoming in the Commonwealth Law Bulletin* 34(3), pp. 527-550, at p. 530.

[49] Subsidiary Body on Scientific, Technical, and Technological Advice (2000) *Report of Fifth Meeting* (Montreal, Canada) p. 55 <www.cbd.int/sbstta/> accessed 16/09/08.

[50] Supra note 25.

[51] UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (1972) *I.L.M.,* 11, p. 1367, in force 17 December 1975. The WHC was adopted by the Member States of UNESCO in 1972 to ensure the "proper identification, protection, conservation and presentation of the world's heritage" (*Operational Guidelines for the Implementation of the World Heritage Convention* (2008) <http://whc.unesco.org> accessed 16/08/09, para 5). It establishes the World Heritage Committee (WHC, Article 8) which, amongst other things, keeps lists (WHC, Articles 11.2 and 11.4) of properties forming part of the cultural heritage and natural heritage of the world (WHC, Article 11.2). These properties are identified by the Member States (WHC, Article 3) and submitted to the World Heritage Committee (WHC, Article 11.1). However, the mere fact that a property belonging to the cultural and natural heritage has not been included in the lists does not mean that the property does not have outstanding universal value for the purposes other than those resulting from inclusion in these lists (WHC, Article12). A similar system of protection is awarded to wetlands of national importance (Convention on Wetlands of International Importance (Ramsar) (1972) *I.L.M.,* 111, p. 963, in force 21 December 1975, Articles 2(1) and 4(1)), especially those that provide habitat for waterfowl.

[52] Supra note 25.

[53] In particular the Policy Statement acknowledges that "[t]he composition and distribution of natural… ecosystems are expected to change as species…respond to the new conditions created by climate change. Species may be forced to shift their ranges, but this movement becomes difficult or impossible in heavily fragmented landscapes" (Supra note 25, *Policy Statement*, at p. 3).

suggest responses to climate change in respect to world heritage,[54] which are to be implemented on local, regional, national, and global levels with an emphasis on research, management, assessment, reactive monitoring, adaptation, and communication and cooperation.[55] The Policy Document specifically addresses international legal questions arising from the issue of species movement due to climate change and states that a number of alterations will have to be made to both the WHC and its Guidelines to make member states specifically take climate change into account when identifying, protecting, and conserving natural heritage for future generations.[56] Thus, if New Zealand is to live up to its obligations under the WHC, it will have to address this issue in regards to its world heritage sights sometime in the near future.[57] Further with awareness of the problem growing internationally it is only a matter of time before similar obligations will arise under the CBD.[58] The extent of

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[54] "World Heritage" includes both Natural and Cultural Heritage. Under Article 2 of the WHC "Natural Heritage" includes "geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation".

[55] Supra note 25, *Report*, p. 40 states that options for planning and managing protected areas faced with climate change include; "creating new protected areas, enlarging existing protected areas, creating replicates of existing protected areas, designating "stepping-stone" or corridor protected areas, creating buffer zones of natural habitat around protected areas, increasing habitat heterogeneity within protected areas (e.g. altitudinal, latitudinal and topographic), restoring, regulating or maintaining disturbance regimes, removing or reducing invasive alien species, reducing other environmental stresses, restoration or rehabilitation of natural habitat, translocation, reintroduction or introduction of species, expanding inventory, modelling, monitoring, sensitivity analysis, etc". But it also recognises that "realistic response strategies cannot be planned without taking into account the impacts from other non-climatic stresses on natural ecosystems, such as habitat fragmentation and loss, alien and invasive species, over-exploitation, pollution, sedimentation, etc which severely impede natural adaptation and mitigation strategies".

[56] *Operational Guidelines for the Implementation of the World Heritage Convention* (2008) at paras. 179 and 180 (<http://whc.unesco.org> accessed 16/09/08) set out the criteria for placing cultural and natural properties on the "In-Danger" list for both ascertained and potential dangers. Para 179 (b) makes reference to "climatic or other environmental factors" as a potential danger, but only in respect of cultural properties. The Policy Document states that these provisions will be clarified to include specific reference to the effects of climate change, particularly focusing on possible adaptation measures at site level, but also recognizing that the causes of climate change "are amenable to correction by human action" by the global community of States Parties. Unfortunately none this was not done when the Guidelines were amended in January 2008 (supra note 25).

[57] New Zealand has three Natural Heritage Sites on the list: Te Wahipounamu which includes the Westland and Mount Cook National Park and the Fiordland National Park, Tongariro National Park, and New Zealand Sub-Antarctic Islands. To date there has been no activity by New Zealand in regards to species movement due to climate change in its world heritage sight Gillspie, A., (2008) personal communication, 11 July).

[58] Supra note 49.

which New Zealand's existing environmental law is going to be able to cope with the issue in light of the recommendations set out in the introductory Chapter will now be examined.[59]

[59] Supra notes 25, 26, 27 and 30.

CHAPTER III - NEW ZEALAND ENVIRONMENTAL LAW

New Zealand's indigenous species protection law can be found under two broad legislative schemes; one under the 'umbrella' of the Conservation Act 1987 and the other under the Resource Management Act 1991. Neither of the two schemes are easily categorised as relating solely to either private or public land. However, in relation to indigenous species they are distinguishable in that under the CA species and their habitats are resources, which are managed by DoC for conservation purposes. Whereas under the RMA, decision makers must give effect to sustainable management; under which conservation forms only one part.[60] A similar "mixed" purpose approach is also taken by the FA.[61] This chapter will focus on the habitat protection offered to indigenous terrestrial species and marine mammals and whether adaptation to climate change is recognised as a consideration in protecting these areas under the two schemes.

PART A - AN INTRODUCTION TO THE CONSERVATION ESTATE

The CA was enacted to serve as a legislative framework for the management of the "conservation estate" and the administration of the various other Acts under which the conservation estate operates.[62] The CA establishes DoC and its conservancies as the mechanism for carrying out this task.[63]

[60] See RMA, Part II.

[61] See Fisheries Act 1996, s 8.

[62] These include the Wildlife Act 1953, Marine Mammals Protection Act 1978, Marine Reserves Act 1971, National Parks Act 1978, Queen Elizabeth the Second National Trust Act 1977, Natives Plants Protection Act 1934, Reserves Act 1977, Wild Animal Control Act 1977, Trade in Endangered Species Act 1989 (Conservation Act 1987, Schedule 1).

[63] Conservation Act 1987, s 5.

1. The purpose of the Conservation Act

The CA sets out the broad principle that land, water, plants, and animals held or managed under the various Acts listed in its first Schedule and under the CA itself are managed for conservation purposes.[64] As a result the CA provides for a more integrated system, which manages the previously disjointed conservation legislation under the shared principle of "conservation".[65]

The CA defines "conservation" as;

> "preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational enjoyment by the public, and safeguarding the options for future generations".[66]

It is important to note that preservation and protection are to be balanced by the anthropogenic values in the latter half of the definition and are therefore not the absolute purposes of conservation. Further, preservation is defined as "the maintenance, *so far as is practicable*, of [the resource's] intrinsic value".[67] Protection means the resource's "maintenance, *as far as is practicable*, in the current state; but includes its restoration to some former state; and its augmentation, enhancement, or expansion".[68] Therefore "conservation" does not necessarily imply a strict maintenance of the status quo.

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[64] Conservation Act 1987, ss 5 and 6.

[65] Supra note 62.

[66] Conservation Act 1987, s 2.

[67] Conservation Act 1987, s 2 (own emphasis).

[68] Conservation Act 1987, s 2 (own emphasis).

2. Habitat protection under the conservation estate

There are various categories of land held for the purpose of both wildlife or marine mammal habitat conservation.[69] The extent of species habitat protection under these categories varies. Most of the areas protected under the conservation estate legislation have secondary or equal purposes which provide for the public enjoyment of the area or resource being protected.[70] In

[69] Areas that are expressly relevant to wildlife preservation and/or protection are: *Conservation Parks* which are managed so that natural resources (which includes animals of any kind (CA, s 2)) are protected and, subject to this, to facilitate public recreation and enjoyment (Conservation Act 1987, s 19); *Wilderness areas* which preserve indigenous natural resources and prohibits any buildings, machinery, other apparatus, livestock, vehicles, and motorised vessels to be constructed, maintained, taken into the land or used on the land (Conservation Act 1987, s 20; , s 14; Reserves Act 1977, s 47); *Ecological areas* are managed for specific ecological purposes which include the protection of habitat for threatened species (Conservation Act 1987, s 21); *Sanctuary areas* are managed to preserve indigenous animals and plants in their natural states and for scientific and related purposes and are generally used for threatened ecosystems (Conservation Act 1987, s 22); *Nature reserves* protect and preserve as far as possible in their natural state unique, rare, scientifically interesting or important indigenous species and habitats (Reserves Act 1977, s 20); *Government purpose reserves,* which are classified for a number of reasons including protection of wildlife, and *Stewardship areas*, which protect natural resources (Reserves Act 1977, s 22); *National Parks* are large areas primarily protected for the use and enjoyment of the public although some areas can be set aside and these areas will require a permit because of the presence of rare and endangered species (National Parks Act 1978, s 4); *Marine Reserves* are preserved for the scientific study of marine life (Marine Reserves Act 1971, s 3). Both the Wildlife Act 1953 and the Marine Mammals Protection Act 1978 also provide for habitat protection in the form of *wildlife sanctuaries, reserves* and *refuges* and *marine mammal sanctuaries* (Wildlife Act 1953, ss 9, 14, 14A; Marine Mammals Protection Act 1978, s 22). The efficacy of these has been much criticised. In regards to Wildlife sanctuaries and refugees it has been said that these are "primarily a tool for species protection rather than for comprehensive habitat protection" (Bosselman, K. and Taylor, P., (1995) The New Zealand law of conservation *Pacific Conservation Biology* 2(1), pp. 113-121 at p. 114). *Marine mammal sanctuaries* are rare and the effectiveness of the ones that have been implemented has been questioned (Supra note 24). In relation to the protection of the species themselves, the Wildlife Act 1953 provides for absolute protection from death, injury, direct attack or disturbance of wildlife (defined in Wildlife Act 1953, s 2) unless it is listed in one of its schedules (Wildlife Act 1953, s 3). Protection and preservation of wildlife is therefore limited by a number of human interests such as hunting and farming. Similarly, the Marine Mammals Protection Act 1978 provides for the protection of marine mammals (Marine Mammals Protection Act 1978, section 4 restricts "takings" of Marine Mammals widely defined in s 2) with the significant exception of "accidental or incidental catch" (Marine Mammals Protection Act 1978, s 26). This encompasses mostly by-catch from fisheries. These two Acts allow certain species to be protected in certain circumstances notwithstanding that the land on which they are is not in itself protected.

[70] Fisher, D. (1989) as cited in Bosselman, K. and Taylor, P., (1995) The New Zealand law of conservation *Pacific Conservation Biology* 2(1), pp. 113-121 at p. 113.

the case of marine mammals it is important to note that there may be overlap with the FA.[71] Given that the purpose of the FA is to "provide for the utilisation of the fisheries resources while ensuring sustainability,"[72] it is inevitable that certain compromises will have to be reached between the fishing industry and the protection of affected marine mammals.[73]

Wildlife management areas are the only areas where the "capacity for movement of wildlife" is recognised.[74] These areas are designed to protect both wildlife and their habitat values. Wildlife under the wildlife management areas has a broader meaning than in the WA and includes both native terrestrial and marine animals.[75] The areas managed by DoC are primarily on public land, however there are also mechanisms in place for privately owned land to be managed for conservation purposes. These will be discussed in Chapter IV.

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[71] In relation to an objection to the establishment of marine reserves the MoC must be satisfied that the reserve would not "interfere unduly with any commercial fishing practice" (Marine Reserves Act 1971, s 5(6)(c)). The Minister of Fisheries must concur with the decision of the MoC (Marine Reserve Act 1971, s 5(9)). In concurring with the decision the Minister of Fisheries must make his own decision on the matter (see *CR3 Industry Association Inc v Minister of Fisheries* [2001] 2 NZLR 345). In doing so he will have to take into account the mixed purpose of the Fisheries Act which involves many elements including utilisation of resources as well as ensuring their sustainability (Fisheries Act 1996, s 5). In relation to the establishment of a marine mammal sanctuary there is a similar parallel consent requirement; the MoC must notify the marine mammal sanctuary with the consent of the Minister of Fisheries (Marine Mammal Protection Act 1972, s 22(2)).

[72] "Ensuring sustainability" means "[m]aintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations"; and "[a]voiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment". "Utilisation" means "conserving, using, enhancing, an developing fisheries resources to enable people to provide for their social, economic, and cultural wellbeing" (Fisheries Act 1996, s 8(2)).

[73] For example, when the Banks Peninsula Marine Mammal Sanctuary was first established to protect Hector Dolphins from gillnetting, the boundary was not set to provide adequate protection because one fisher would have been put out of work if it had been extended (Dawson, S. and Slooten E., (1993) Conservation of Hector's Dolphin: The case and process which led to establishment of the Banks Peninsula Marine Mammal Sanctuary *Aquatic Conservation: Marine and Freshwater Ecosystems* 3, pp 207-221 at pp. 215-216) A Draft Hector's and Maui's Dolphins Threat Management Plan (supra note 21) has proposed to extend the sanctuary. However, critics say that the plan as it stands still does not provide adequate protection for dolphins. Green Party Conservation Spokesperson Metiria Turei says that "the plan stops well short of providing the necessary protection for these gravely threatened dolphins by accommodating for economic interests in the dolphin habitat…Striking a balance between the dolphins and set-net fishing is not acceptable when the populations are so critically low" (Media Release (2008) *Dolphin Plan fails to guarantee species survival,* 22 March <http://global.factiva.com/ha/default.aspx> accessed 10/09/08.

[74] Conservation Act 1987, s 23B.

[75] Conservation Act 1987, s 23B(c), and Wildlife Act 1953, s 2.

3. Recognition of climate change in the Conservation Act

The CA does not expressly state that DoC must take into account the effects of climate change in implementing the Act.[76] However, in a recent United States Supreme Court case the Court held that the agency responsible for the administration of the environmental statute concerned could not ignore the effects of climate change simply because Congress did not have it in mind when it drafted the legislation 30 or so years ago.[77] As it is part of DoC's duty to "manage for conservation purposes"[78] all natural resources (which includes all animals and the land on which they live)[79] to promote the benefits "to present and future generations"[80] as well as "safeguarding the options for future generations"[81] it is likely a similar decision would be reached by the New Zealand courts in relation to DoC. In order for them to fulfil this above purpose in today's world the effects of climate change would have to be implied into the provision.

4. Implementation of Conservation Act purpose

In order to implement the purposes of the conservation legislation under the CA and the other relevant Acts, DoC and its conservancies can put in place a hierarchy of management documents consisting of GMP,[82] CMS[83] and CMP.[84] These management polices, strategies,

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[76] DoC's Statement of Intent does identify climate change as a challenge to New Zealand's native flaura and fauna but fails to indicate how this is to be managed (Department of Conservation (2008-2011) *Statement of Intent* (Wellington, New Zealand)).

[77] *Massachusetts v Environmental Protection Agency* n127 S. Ct 1438 (2007).

[78] Conservation Act 1987, s 6(a).

[79] Conservation Act 1987, s 2.

[80] Conservation Act 1987, s 6 (c)(i).

[81] Conservation Act 1987, s 2. See also *North Shore City Council v Minister of Conservation* [2003] 2 NZLR 497 at para. 42 where the High Court deduced from the phrase "future generations" that "the plain statutory intention is that a long term view of conservation is required so that lands managed for conservation purposes are held in such away as to ensure that future options for land (including those which may not yet be foreseen) are not foreclosed".

[82] Conservation Act 1987, ss 17B and 17C. GMPs operate on a national level to implement the Act.

[83] Conservation Act 1987, s 17D. CMS operate alongside GMPs to implement the Act.

and plans are the primary method of establishing and implementing regional conservation and recreational goals, and objectives and methods of management.[85] They also define DoC's regional advocacy goals outside public lands and identify all protected areas and key values within the region. This leads to the integrated management of natural and historic resources for recreational, tourism and other conservation purposes.

Through CMSs and CMPs DoC can also have an indirect impact on private landowners as LAs must have regard to these in implementing regional policy statements,[86] district plans,[87] and regional plans.[88] However, the CA does not "impose any primary implications on private landowners".[89] It is primarily through the RMA that the use of private land is regulated.

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[84] Conservation Act 1987, s 17E. CMPs implement the CMPs and GMPs and establish a more detailed objective for integrated management. Other Acts managed under the conservation estate also provide for management plans. For example, population management plans under both the Wildlife Act 1953 (s 14F) and Marine Mammals Protection Act 1978 (s 3E) may be made for threatened or other species. These plans may also include a maximal allowable level of fishing-related mortality (Marine Mammals Protection Act 1978, s 3F, and Wildlife Act 1953, ss 14G and 14H). Management plans can also be prepared under the National Parks Act 1978 which contain its operational detail including any restrictions on park users and any values the park is held for (National Parks Act 1978, s 45).

[85] Supra notes 82, 83, and 84.

[86] Resource Management Act 1991, s 61(2)(a)(i).

[87] Resource Management Act 1991, s 74 (2) (b) (i).

[88] Resource Management Act 1991, s 66 (2) (c) (i). Unlike policy statements and plans under the RMA consent authorities are not expressly obligated to have regard to these management plans and strategies when considering a resource consent. However, one commentator believes they should and do so under "any other matter" they consider relevant to determining the application (Resource Management Act 1991, s 104 (1) (c) and Harris, R., (2004) Protected public land and related law *Handbook of Environmental Law,* Harris, R., Ed. (Royal Forest and Bird Protection Society of New Zealand Inc, Bush Press Communications, Wellington), pp. 443-471 at p. 460. However there is no case law directly on point.

[89] Voigt, C., (2003) Protection of Indigenous Forests on Private Land – Role of Local Government *New Zealand Journal of Environmental Law* 7, pp. 169-202 at p. 184.

PART B - AN INTRODUCTION TO THE RESOURCE MANAGEMENT ACT 1991

Prior to 1991, there was little integration of resource conservation and resource development matters.[90] This changed with the introduction of the RMA, which was implemented as an overriding environmental legislation with the fundamental policy objective of integrating conservation and development issues under the principle of "sustainable development".[91] This is primarily administered by LAs, however the MfE, the MoC also play an important role.[92]

1. The purpose of the Resource Management Act

Part II of the RMA sets out the various purposes of the Act. Under section 5 the overriding purpose of the RMA is to "promote the sustainable management of natural and physical resources".[93] The habitats of indigenous species arise in various elements of this purpose including their sustainable management,[94] sustaining their potential for future generations, safeguarding their life-supporting capacity, and avoiding, remedying or mitigating any adverse effects of activities on them.[95] However, these are to be balanced with the anthropogenic considerations of "sustainable management" including the social, economic,

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[90] Bosselman, K. and Taylor, P., (1995) The New Zealand law of conservation *Pacific Conservation Biology* 2(1), pp. 113-121 at p. 114.

[91] Supra note 90, p. 113.

[92] The MoC prepares and recommends New Zealand Coastal Policy Statements (Resource Management Act 1991, s 28 (a)) and the MfE recommends issue for national policy statements (Resource Management Act 1991, s 24 (a)) and monitors the effect and implementation of the RMA and the national policy statements (Resource Management Act 1991, s 24 (f)).

[93] Resource Management Act 1991, s 5(1).

[94] "Natural and physical resources" include "land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to NZ or introduced) and all structures" (Resource Management Act 1991, s 2).

[95] "Sustainable management" is defined as: "managing the use, development, and protection of natural and physical resources in away, or at a rate, which enable 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 reasonable 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 *environmen*t" (Resource Management Act 1991, s 5(2), own emphasis added). "Environment" is widely defined and includes ecosystems and natural and physical resources (Resource Management Act 1991, s 2).

and cultural well-being of people and communities as well as their health and safety.[96] Section 6, 7, and 8 provide additional factors for decision makers to take into account when making decisions on resources, carrying out their functions and duties, and achieving "sustainable management".[97]

2. Habitat protection under the Resource Management Act

Under section 6 the protection "of areas of significant indigenous vegetation and significant habitats of indigenous fauna" is recognised as a matter of national importance, which decision makers in carrying out their function and duties must "recognise and provide for".[98] The mention of "habitat" reiterates that the RMA is not a statute to control wildlife; rather it is concerns only their habitats.[99] It is also important to note that "protection" under section 6(c) does not mean absolute protection, but is watered down by the purpose of sustainable

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[96] There have been various arguments about the interpretation of section 5, however the courts favour the argument that neither the human nor the ecological aspect of the section trumps the other, rather they both carry the same weight and need to be weighed up on a case by case basis (Fisher, D., (1991) Clarity in a Little While *Terra Nova*, pp.50-51).

[97] The extent that these have to be taken into account is hierarchical with s 6 decisions being the most important ("recognise and provide for") and s 8 being the least ("take into account") with s 7 being in the middle ("particular regard to").

[98] "Significant" means in the regional locality as opposed to nationwide (*Minister of Conservation v Western Bay of Plenty District Council* (unreported), Environment Court Auckland, A71/2001, 3 August 2001, Bollard J, paras. 19-20).

[99] *Kaimanawa Wild Horse Preservation Society Inc v Attorney General* [1997] NZRMA 356.

management.[100] Part II of the RMA highlights the important difference in roles by decision makers under the RMA and DoC under the CA. For the most part DoC has a mandatory direction to protect habitats whereas this is merely a consideration to be taken into account by decision makers under the RMA. [101]

3. Recognition of climate change in the Resource Management Act

Section 7 of the RMA states that decision makers must "have particular regard to…the effect of climate change" when making decision and carrying out their functions and duties. [102] The

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[100] This is because the s 5 purpose of sustainable management is paramount as illustrated by the words "in achieving the purpose of this Act" at the start of s 6. The decision of *Royal Forest & Bird Protection Society v Buller District Council* [2006] NZRMA 193 is an extreme example of the balancing of development and protection seen throughout the RMA. In this decision the consent given by the Buller District Council for a coast mine on the Stockton Plateau was challenged, first in the Environment Court and later in the High Court, on the grounds that it would disturb the habitat of the spotted kiwi and the Powelliphanta snail, the former being in "gradual decline" in New Zealand, and the latter listed as absolutely protected under the Wildlife Act 1953 and occurring only on the Stockton Plateau (ibid, p 209). This placed their habitat squarely within matters of national importance under s 6 (c) RMA. On the other side of this argument were the huge economic advantages the mine brought both to the region and the nation (the value of the coal being $850 million and the benefit to the region valued at over $300 million). Both species had relatively specific habitat requirements (ibid, pp. 209-210). The consents required extensive mitigation plans of Solid Energy, including the complete relocation of the habitat and the species to a predator proof and fully monitored new location, and the relocation back after the mining had finished. The Environment Court acknowledged that there was a risk of failure (*Solid Energy NZ Ltd v West Coast Regional Council,* (unreported) Environment Court Christchurch, C74/2005, 24 May 2005, Smith J at para. 132) but concluded that on the balance of probability the mitigation factors would be successful. This standard of proof was upheld by the High Court despite the uncertainty of the outcome of the mitigation plans, the significance of the national values involved, and potential impact of those values if the mitigation plans were unsuccessful i.e. extinction of a whole species. See also *Clifford Bay Marine Farms Ltd v Marlborough District Council* (unreported), Environment Court Christchurch, C131/2003*,* 22 September 2003, Jackson J) which concerned a proposed mussel farm and the potential risk on Hector's dolphins.

[101] Part II includes ss 5, 6, 7, and 8. Section 7 will now be discussed. Section 8 requires the decision makers "to take into account" the principles of the Treaty of Waitangi. According to *New Zealand Maori Council v Attorney General* [1987] 1 NZLR 641, these principles include: a duty to be well informed; partnership and reasonable co-operation between the Crown and Maori; and active protection of the Maori peoples interests. These are not exhaustive and new duties may arise out of new circumstances.

[102] Resource Management Act 1991, s 7 (i)). It has been questioned whether climate change should be under matters of national importance under s 6 (Ministerial Group on Climate Change Cabinet Minutes (2002) *Planning for the Effects of Climate Change: The Role of the Resource Management Act,* 27/3A (Wellington, New Zealand, para 30). However, given the overall judgment approach adopted by the courts when weighing conflicting issues in Part II of the Resource Management Act 1991 there is, in practice, no statutory hierarchy between ss 6, 7 and 8 (see *NZ Rail v Marlborough District Council* [1994] NZRMA 70, *Trio Holdings v Malborough District Council* [1997] NZRMA 97, *North Shore City Council v Auckland Regional Council (Okura)* [1997] NZRMA 59).

decisions to date on this provision have concerned activities affecting climate change mitigation. This contains an accepted public advantage and thus the courts have been generous in their weighting of the climate change provision and in some cases have even elevated it above matters of national importance under section 6.[103] Although, preservation of biodiversity is arguably also in the public interest, it remains to be seen whether the courts will be as generous in regards to climate change adaptation as they have been with mitigation.

Regional councils, in giving effect to the purpose of the RMA, must prepare policies and objectives in relation to: "any actual *or potential effect of the…protection of the land* which is of regional significance";[104] and "maintaining indigenous biological diversity".[105] Similarly, territorial authorities have a specific obligation to control "any actual or *potential effects* of the use, development, or protection of land, including for the purpose of…the maintenance of indigenous biological diversity".[106] Therefore, taking into consideration all of the above sections, species movement due to climate change (a "potential effect") should be taken into account by local authorities in exercising their policy and plan preparation functions under the RMA.

4. Implementation of sustainable management

The implementation of the principles of "sustainable management" as laid out by the above sections is achieved through the hierarchy of policy statements, regional and district plans,

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[103] This was seen in *Genesis v Franklin District Council* [2005] NZRMA 541 which concerned an application to install a windfarm on unspoilt coastal environment. The court effectively elevated the s 7 climate change matters above the matter of national importance set out in s 6(a) of "preserving the natural characteristic of the coastal environment…from inappropriate subdivision, use and development". Although this seems to be an error of law, the Court justified this approach by holding that s 7 matters (including climate change) is relvant to what is and what is not "inappropriate". In *The Outstanding Landscape Protection Society Inc. v Hastings District Council* Environment Court, WA24/2007, 13 April 2007, Judge Thompson held that the focus should be on s 6, rather than the competing s 7 climate change matter. This case however, concerned s 6(e), which unlike, s 6(a) in the *Genesis Case*, does not have the opt out of "protection of…*inappropriate* subdivision, use and development". It is worth noting that this phrase is absent s 6 (c) (which concerns the protection of indigenous habitats) and thus more weight may be given to each this particular section.

[104] Resource Management Act 1991, s (1) (b) (own emphasis).

[105] Resource Management Act 1991, s30 (1) (ga) (own emphasis).

[106] Resource Management Act 1991, s 31 (1)(b)(iii) (own emphasis).

and resource consents.[107] The policy statements under the RMA must be "give[n] effect to" in regional coastal plans, regional plans,[108] and district plans.[109] This "give effect to" is the highest onus put on local authorities in the preparation of these plans. The plans themselves set out the rules to assist a regional council (in the case of its regional plan and costal regional plan) or territorial authority (in the case of its district plan) to "carry out its functions in order to achieve the purpose of this Act,"[110] A consent authority must also "have regard to" the relevant policy statements and/or plans mentioned above when considering applications for a resource consents.[111]

PART C - CONLUSION

As seen above, the two environmental statutory schemes allow for both LAs and DoC to protect habitat and in doing so, take into account the effects of climate change. However, general and specific policies need to be put in place under both schemes in order to raise awareness for the potential need for protection of areas that may serve as habitats in the future due to the impacts of climate change and for this to be considered in the decision making concerning habitat protection. This can be best achieved by making specific provision for it in regional and national policy statements under the RMA,[112] general statement of policy,

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[107] These operate on the directives that activities affecting a particular resource are either permitted unless prohibited by the regional or district plan, or prohibited unless permitted by the regional or district plan, or by a resource consent. *National Policy Statements* are optional and there are currently none in operation. *New Zealand Coastal Policy Statements* on the other hand are mandatory; the present one dates back to 1994, with a proposed draft notified 8th March 2008. Both policy statements purpose is to state objective and polices for matters of national importance that are relevant to achieving the purpose of the Resource Management Act 1991. (Resource Management Act 1991, ss 45 (1) and 56). *Regional Policy Statements* are mandatory (Resource Management Act 1991, s 60) and are to "achieve the purpose of the Act by providing an overview of the resource management issues of the region and policies and methods to achieve integrated management of the natural and physical resources as a whole region" (Resource Management Act 1991, s 59).

[108] Resource Management Act 1991, s 67 (3).

[109] Resource Management Act 1991, s 75 (3).

[110] Resource Management Act 1991, ss 63 and 72.

[111] Resource Management Act 1991, s 104 (1) (b).

[112] Supra notes 108 and 109.

management plans and strategies under the CA[113] as these must be taken into account, to one extent or another, in environmental decision making.

Both the national and international literature shows a consensus that, due the nature of the issue of species movement, there is a need to take an integrated approach in the protection of biodiversity and its adaptation to climate change.[114] This is especially the case in New Zealand where LAs are in charge of the practical implementation of planning policies that affect indigenous species, whereas DoC is responsible for the protection and conservation of these species. The input from DoC through CMSs and CMPs is important, especially as LAs are sometimes seen as having "too limited resources and knowledge to undertake the complicated environmental assessment strategies and evaluation programmes that are required of sec 6(c) of the [RMA]".[115] Amendments to sections 30 and 31 of the RMA in 2003 were intended to make it clear that LAs have an active role in preserving biodiversity and mandate LAs to "consider the consequences of all effects on biodiversity not simply the significance of a species or habitat".[116]

Conservation strategies and plans thus not only promote a "strong conservation policy" which can be lacking in LA decisions[117] but also provide LAs with the information and knowledge on wildlife and marine mammals that is necessary for adapting to the impacts of climate change on them. Similarly a NPS would re-emphasise LAs goal in preserving biodiversity and mandate them to take into account the effects of climate change on biodiversity. Especially with the issue of species movement, which may transgress regional and district

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[113] Supra notes 82, 83, and 84.

[114] Supra notes 25, 26, and 27.

[115] Supra note 89, p. 181. A survey conducted in 1999 by the Ministerial Advisory Committee on Biodiversity on Private Land revealed that only a third of regional councils and 11% of territorial authorities thought that they had a leading role in biodiversity conservation (Tonkin, and Taylor, (1999) *Stocktake Of Local Government & Community Goals, Processes & Measures For Biodiversity Management,* Report prepared for Ministry for the Environment (Wellington, New Zealand)).

[116] Supra note 1, p. 364.

[117] This is due to the fact that LAs must make their decisions give effect to the s 5 RMA purpose of sustainable management.

boundaries, LAs will not only have to work with DoC but also co-operate and establish a consistent approach with each other. An integrated approach brought about by an overarching national policy statement would provide certainty and consistency for landowners and councils alike and enable authorities to pool their resources and knowledge.

CHAPTER IV - GENERAL POLICY

The extent of which the issue of the impact of climate change on biodiversity is already recognised in polices, strategies, and plans under both the RMA and CA will now be examined. Subsequently, how the implementation of a NPS under the RMA and a GMP under the CA could provide possible solutions for some problems, which will undoubtedly arise in the implementation and upholding of future potential habitat protection will be discussed.

PART A - CURRENT STRATEGIES, POLICIES AND PLANS IN PLACE

1. National level

(i) New Zealand Biodiversity Strategy

At a national level New Zealand implemented the NZBS[118] in 2002 to fulfil part of its commitment as a party to the CBD. The NZBS is implemented by various government departments including DoC, MfE, and the Ministry of Fisheries.

The NZBS sets out 4 overarching goals and a variety of action plans to enable the achievement of those goals by 2020. The only recognition of the impact of climate change on biodiversity in the NZBS is in relation to coastal and marine biodiversity where one of the issues acknowledged is the lack of "information needed to anticipate the nature and intensity of ecological changes that might be induced by climate change".[119] However, there was no such statement for the biodiversity on land. The NZBS recognises that "biodiversity is best conserved in-situ by conserving ecosystems and ecological processes to maintain species in

[118] New Zealand Biodiversity Strategy (2002) <www.biodiversity.govt.nz> accessed 16/09/08.

[119] Supra note 118, p. 60.

their natural habitats"[120] The NZBS also recognises that in order to achieve its goals on a national level there is a need for incentives to protect and maintain habitat on private land, both community and individual action, a clarification of the different roles of agencies under different legislations, extra funding, more information and expertise, and the precautionary principle. There is also a recognition that for effective governance a NPS is required, which would guide decision makers on implementing the biodiversity protection provisions of the RMA as the NZBS itself has no legal standing.[121]

The Review Report of the NZBS recommends the addition of a new objective, namely; "consideration of the impacts of climate change on biodiversity and the implications for adaptation responses".[122] In the report it was recognised that "both indigenous and introduced biodiversity are highly likely to be affected by climate change with implications for biodiversity managers that are not yet widely appreciated or understood, but nevertheless need planning consideration"[123] and that "the potential impacts of climate change on biodiversity be accorded a higher priority in the New Zealand climate change policy".[124] Three years on from this report there has been no further development to the NZBS, to the contrary, a proposal for a NPS was abandoned in 2006.[125]

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[120] Supra note 118, Principle 8.

[121] Although it does influence the content of legislation and regulation as well as departmental funding (Bellingham, M., (2004) Biodiversity and sustainability *Handbook of Environmental Law*, Harris, R., (Ed.) (Royal Forest and Bird Protection Society of New Zealand Inc, Wellington, New Zealand), pp. 385-408 at p. 387).

[122] Green, W. and Clarkson, B., (2009) *Turning the Tide? A Review of the First Five years of the New Zealand Biodiversity Strategy – The Synthesis Report* (Wellington, New Zealand), pp. 2 and 4.

[123] Supra note 122, p. 2.

[124] Supra note 122, pp. 5 and 43.

[125] See below note 131.

(ii) Abandoned National Policy Statement of Biodiversity

The proposed NPS on Biodiversity would have given "effect to the NZBS by providing national direction on implementing provisions of [RMA] relevant for conserving and sustainably managing indigenous biodiversity".[126]

The NPS on Biodiversity had four areas of focus. Important for the present purposes were the first and third of these. The first focus was "maintaining and enhancing ecological functioning of areas and habitats for halting decline in indigenous biodiversity".[127] As part of this objective, those exercising powers were mandated to "*identify* areas of indigenous vegetation and habitats of indigenous fauna that are important for halting the decline of indigenous biodiversity".[128] The third focus of the NPS was to address various pressures on indigenous biodiversity, most importantly it was recognised that as well as direct impacts of pollution, indigenous biodiversity has also been affected by "indirect impact through *climate changes that affect the range of species and distribution of ecosystems"*.[129]

The NPS on Biodiversity also proposed to remedy one of the issues recognised by the NZBS of the RMA provisions; namely, that biodiversity protection has not been effectively implemented for reasons including the uncertainty of the management roles of the different agencies responsible for the management of biodiversity and their relationship with each other under the different legislative regimes.[130] Unfortunately the NPS was abandoned in 2006 and

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[126] Ministry for the Environment (2001) *Towards a National Policy Statement on Biodiversity – Preliminary Wording* (Wellington, New Zealand).

[127] Supra note 126, p. 5.

[128] Supra note 126, p. 5 (own emphasis). This policy placed significant emphasis on the essentiality of *active management* of those exercising functions to halt the decline of biodiversity.

[129] Supra note 126, p. 5 (own emphasis).

[130] Supra note 126, p. 40, Under Issue 4.3 of the draft statement it was recognised that the "response to loss of biodiversity has sometimes been hampered by uncertainty about focus…This is compounded by lack of integration between the agencies" (Supra note 126, p. 23). In developing strategic approaches to remedy this it was proposed that regional councils, in collaboration with territorial authorities and other agencies, as well as individuals, prepare a strategy to "act as a framework for co-ordinated management of indigenous biodiversity in the region" and that this should lead the development of corridors and buffers to protect and enhance priority areas (supra note 126, p. 40).

replaced with a "Statement of national priorities for protecting rare and native vegetation on private land" (National Statement).[131]

(iii) Statement of National Priorities

The purpose of the Statement of National Priorities is to strengthen biodiversity work on private land and provide LAs with information on the types of habitats on private land which need to be protected. The priority areas are those which have 20% or less remaining indigenous cover. The Statement is considerably shorter than the proposed NPS on Biodiversity and does not aim to identify all native biodiversity that is to be maintained by LAs under sections 30 and 31 or section 6(c) RMA. The Statement is also much narrower in scope and less forward looking than the NPS on Biodiversity.[132] The Statement's most consequential downfall is that, unlike a NPS, it does not have to be applied consistently across the board by all LAs and decision makers carrying out their functions under the RMA. [133]

(iv) General Conservation Policy

DoC has also implemented a GMP (the General Conservation Policy)[134] to "shape the new round of conservation management strategies and conservation plans over the next few years".[135] However, the GCP does not mention the effects of climate change on biodiversity.

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[131] Minister of Conservation and the Minister for the Environment (2007) *Statement of national priorities for the protection of rare and threatened native biodiversity on private land* (Wellington, New Zealand). No concrete reasons seems to have been given for the abandonment of the NPS on biodiversity, however the current Minister of Conservation, Steve Chadwick, has suggested that a NPS on biodiversity is still a priority for the Labour Government (Hansard, Questions to Ministers, Wednesday 7 November 2007, no. 11).

[132] For example, the statement only seeks to protect "habitats of acutely and chronically threatened species" (supra note 131, Priority 4).

[133] Although the Statement may have to be taken into account by consent authorities under s 104(1)(c) RMA as "any other matter" that may be relevant to the application of a resource consent.

[134] Department of Conservation (2005) *Conservation General Policy* (Wellington, New Zealand). There is also a Department of Conservation (2005) *General Policy for National Parks* (Wellington, New Zealand).

[135] Supra note 134, p. 3.

2. Regional level

The National Statement on Biodiversity has been adopted at a regional level by some LAs. For example Environment Canterbury has adopted the National Statement of Priorities in its Biodiversity Strategy.[136] The Canterbury Biodiversity Strategy recognises that the main potential effect of climate change on biodiversity is a "gradual change in habitat, changes in distribution, and increased threats from pests and disease"[137] and that, as a result, it "will be crucial that species are able to relocate or move into more suitable areas, which can only happen if there are corridors along which species can move".[138]

Unfortunately the Strategy seems to have replaced a report discussing how potential climate change effects could be given policy consideration within the Canterbury Regional Policy Statement. [139] This would have given the issue legal standing, as it would have had to be given "effect" to by the regional authority and territorial authorities in regional and district plans. [140] The Strategy on the other hand is a non-binding document.[141] Further, even if the

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[136] Environment Canterbury (2008) *A Biodiversity Strategy for the Canterbury Region* (Christchurch, New Zealand), p. 27.

[137] Supra note 136, p. 22.

[138] Supra note 136, p. 22. It also recognises that; "[i]n reality, species' habitats are frequently constrained by human development and structures, such as urban development, farm land, sea-protection structures, etc. Therefore, the adequacy of buffer zones and corridors to allow for shifts in habitat and distribution will become increasingly important, as will reducing to the greatest extent practicable, existing stresses on vulnerable species, ecosystems and habitats" (supra note 136, p. 22).

[139] Environment Canterbury (2007) *Climate Change – An analysis of the policy considerations for climate change for the Review of the Canterbury Regional Council Policy Statement* (Christchurch, New Zealand). The report recognised the shift in terrestrial, aquatic and marine species' distribution, the "inability of indigenous species to adapt due to fragmented land environments", and "the inability of constrained wetlands and intertidal habitats shift due to human development". These were all relevant matters to be considered by decision makers under the Soil and Land Use, Landscape and Heritage, Biodiversity and Pest, Water, Coastal Environment, and Urban Development Chapters of the new Regional Policy Statement.

[140] Resource Management Act 1991, ss 66(2)(a) and 74(2)(a)(i). Regional policy statements cannot contain "rules" that bind individuals but regional and district plans can (*Auckland Regional Council v North Shore City Council* [1995] NZRMA 424 (CA)).

[141] Although it has been adopted by a number of organisations including some district councils, DoC, and non-governmental organisations (supra note 136, p. 4).

changes had been adopted into the Canterbury Regional Policy Statement they would only apply to authorities within Canterbury.

3. Conclusion on the adequacy of the current strategies, policies and plans

As has been emphasised again and again,[142] without a legally binding NPS recognising the need for biodiversity protection on all levels of government, especially in light of the impacts of climate change, this issue will not be adequately recognised by all LAs. It has been widely suggested that such a statement is necessary to provide clear guidance over the issues arising out of LA implementation of section 6(c) RMA.[143] Similarly, the issue will not be recognised by regional DoC conservancies in their management strategies and plans without the GCP expressly highlighting that climate change will impact on indigenous species and their habitats. In addition, a NPS and GMP may also provide for possible solutions that may arise from wanting to protect potential future habitats. These will now be discussed.

PART B - PROBLEMS OF PROTECTING POTENTIAL FUTURE HABITATS

1. Identification of future habitats

(i) Research to enable identification and preparation of potential future habitats

It is of paramount importance that there is adequate research into the movement of individual species to enable the identification of potential future habitats so they can be protected and prepared in time to receive the moving species.

Under the RMA, LAs must gather such information and undertake such research as is necessary to carry out their functions under the Act.[144] As mentioned above these functions

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[142] Supra notes 118 and 122.

[143] See for example, Parliamentary Commissioner for the Environment (2001) *Weaving Resilience into our Working Lands: Future Roles for Native Plants on Private Lands* (Wellington, New Zealand), p.116, and Parkinson, B., (2000) New Zealand's biodiversity strategy *Brookers Resource Management Bulletin* 3(12), pp. 134-136, at p. 134.

[144] Resource Management Act 1991, s 35(1).

include protecting indigenous habitat,[145] providing for the sustainability of their potential for future generations,[146] as well as avoiding, remedying, or mitigating any adverse effects of activities on them.[147] Thus, at least in theory, LAs should actively gather information on possible potential habitats. However, LAs are not concerned with the actual species themselves.[148] It is thus important that they work together with DoC, which has stated that it intends to "undertak[e] ongoing analysis of the implications of climate change for places and species",[149] to enable them to identify the relevant areas.

The problem is, both DoC and LAs have limited resources to undertake this research. [150] This will raise difficulties, especially as the current data is still not adequate enough to ascertain even the status quo. The data that is available is collected by direct survey methods on individual species (for example tagging for dolphins[151] and call rates for kiwis[152]). This can reveal very little about the distribution of the population as a whole. [153]

While methods are being developed specifically for surveying climate change distribution shifts[154] to get the full benefit out of such new methods there needs to be a collaboration of resources and knowledge. This is recognised by DoC in its Statement of Intent which states the focus in 2008-2009 will be on;

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[145] Resource Management Act 1991, s 6(c).

[146] Resource Management Act 1991, s 5(2)(a).

[147] Resource Management Act 1991, s 5(2)(c).

[148] Supra note 99.

[149] Supra note 76, p. 8.

[150] Supra note 89, p. 181, and supra note 121, p. 389.

[151] Supra note 24, p. 333.

[152] Supra note 20, p. 7.

[153] Supra note 24, p. 333. Further, although data is available for the more 'popular' animals such as the kiwi and dolphins it is important to note that even this data is severely lacking (Dawson, S. and Slooten, E., (1993) Conservation of Hector's Dolphins: The case and process which led to establishment of the Banks Peninsula Marine Mammal Sanctuary *Aquatic Conservation: Marine and Freshwater Ecosystems* 3, pp. 207-221 at p. 209).

[154] See Shoo, L., Williams, S. and Hero, J., (2006) Detecting climate change induced range shifts: Where and how should be looking? *Austral Ecology* 31, pp. 22-29.

> "[a]rticulating a science model and system to meet future needs within the Department, including addressing ways to communicate, and promote the use of, new knowledge…[and]…working with others to continue to develop knowledge of the implications of climate change for places and species."[155]

A NPS could provide a mechanism for the collaboration of this information and associated need for resources.

(ii) Selection criteria for the identification of habitats

Once there is adequate research on species movement, criteria will need to be in place which allow LAs and DoC to identify the new potential habitat and provide these adequate protection in anticipation of the new inhabitants. Currently, LA and DoC have different selection criteria for identifying areas suitable for protection. It is doubtful, both in practice and theory, that either allows for the protection of areas that may provide habitats for indigenous species in the future.

(a) Protected Natural Areas Programme

DoC uses the PNAP to "identify examples of the full range of indigenous and biological landscape features in New Zealand that [are] suitable for protection".[156] The GCP states that each CMS and CMP should include identification of indigenous terrestrial species and protected marine species and their habitats.[157] However, the GCP does not mention how this

[155] Supra note 76, p. 41.

[156] Supra note 121, p. 389.

[157] Supra note 134, Policy 4.1(a)(i) and 4.4(a).

should be done. Thus this is left up to each conservancy, the majority of which use PNAP surveys to provide their own criteria.[158]

The Canterbury CMS[159] acknowledges that a current limitation in the protection of habitat is that only 30% of Canterbury's land ecosystems have been surveyed by the PNAP surveys.[160] Given that the current status quo has not yet been completely identified by the PNAP it is highly unlikely that any possible future habitats will be identified any time soon. The Canterbury CMS also recognises that although there are plenty of restoration opportunities the lack of resource make them unlikely to be achieved.[161]

(b) Significant Natural Areas

As mentioned above, LAs have an obligation to protect "significant habitat" of indigenous fauna. This usually achieved by establishing SNAs on private and public land, which are then listed in the district plan. What constitutes "significant habitat" is somewhat uncertain and is usually left up to each LA to decide.

(c) "Significant"

The term "Significant" is not defined by the Act. The case law has also been unhelpful, stating that "significant" implies a notion of judgement as to the natural resources in the

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[158] For example, in the Northland CMS (Department of Conservation - Northland Conservancy (1999) *Northland Conservation Management Strategy* (Whangarei, New Zealand)) PANP survey are used to identify "priority areas" that have a variety of values including habitat values, historic values, and visitor and recreation values. Areas with just one of the above values are defined as "other areas" (ibid, p. 61). These areas include the large forest tracts in Northland that provide significant habitats for the Kiwi. While these areas are said to be "important" they are not given priority (ibid, p. 61). One of the reasons given for this lesser protection is the lack of information and survey work available in the region. Moreover, the management of these "other areas" is "concentrated on protection of the principal values of the area rather than all possible opportunities"(ibid, p. 89). Thus any possible opportunity for an area to become a future potential habitat is precluded from being and "other area" much less a "priority area". Even if the habitat was part of a priority area, its protection would need to be balanced against the other values.

[159] Department of Conservation – Canterbury Conservancy (2002) *Canterbury Conservation Management Strategy* (Christchurch, New Zealand).

[160] Supra note 159, p. 143.

[161] Supra note 159, p. 147.

district that should be protected.[162] Thus, the term "significant" is usually determined by meeting various criteria in the district plans. These can broadly be categorised into representativeness, rarity/distinctiveness, ecological context, and sustainability[163] but each district plan develops its own approach as to the finer details of these criteria. In some Districts the sustainability criterion has a hint of a futuristic element.[164] However, sustainability is generally considered as a secondary criterion and the other criteria focus on the present state of the area.[165] Further, none of the district plans take into account the potential significance of an area in the future, nor do any specifically recognise climatic changes as an issue for biodiversity.

(d) "Habitat"

To add to the inconsistency of the definition of "significant habitat", there is also no definition of "habitat" in the RMA, nor is there any case law on the matter.[166] The only proviso is that "habitat" needs to be "significant" in order to qualify for protection.[167]

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[162] Supra note 98.

[163] Parliamentary Commissioner for the Environment (2001) *Weaving Resilience into our Working Lands: Future Roles for Native Plants on Private Lands* (Wellington, New Zealand), p. 43.

[164] For example, the Grey District Plan includes the "sustainability" of the area as a criteria, which is described as "a measure of the ability of the identified areas to remain viable or their *potential* to *become viable* in the long term" (Grey District Council (2005) *Grey District Plan* (Greymouth New Zealand), Policy 5.4.2). Similarly, the Partially Operative Queenstown Lakes District Plan lists "the *future of ecological value of the area*" as relevant in the sustainability criteria (Queenstown Lakes District Council (2008) *Partially operative Queenstown Lakes District Plan* (Queenstown, New Zealand), Appendix 5, Part II, C (vi)). Many plans also include ecological buffers, linkages, or corridors to other significant habitats as worthy of protection (For example see Northland Regional Council (1999) *Northland Regional Policy Statement* (Whangarei, New Zealand), Appendix III).

[165] Supra note 163, p. 43.

[166] It is defined under the Conservation General Policy as "the environment in which a particular species or group of species lives" (supra note 134, p. 56), and the New Zealand Biodiversity Strategy: "a place or type of area where an organism naturally occurs" (supra note 118, p. 140).

[167] Resource Management Act 1991, s 6(c).

Under the NZCPS 1994[168] some guidance is given in regards to coastal habitats. Although the NZCPS distinguishes between "habitat" and "areas,"[169] it does extend protection for all indigenous species by requiring the avoidance of "any actual or potential effects of activities" on all "areas," in addition to habitat, where those areas are important for the continued survival of the species[170] This could therefore encompass areas which could provide possible future habitats as these would no doubt be important for the continued survival of the species. Although this policy statement only applies to the New Zealand coastal environment, in light of the increasing biodiversity crisis, one commentator has argued an approach similar to the one adopted in the NZCPS should be adopted under section 6(c) so that areas important to the species survival other than their actual current habitat can be protected.[171]

There are also alternative definitions for "habitat", which would include areas that are not necessarily part of the species current habitat but are necessary for its ongoing survival. Recently there has been much support for a more resource-based definition of habitat[172] which would capture all areas occupied by a species in order for it to carry out its life cycle. This is argued to be consistent with the NZCPS 1994 approach in its recognition and protection of "areas".[173]

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[168] Minister of Conservation and Minister for the Environment (1994) *New Zealand Coastal Policy Statement* (Wellington, New Zealand).

[169] Supra note 168, Policy 1.1.2(a).

[170] Supra note 168, Policy 1.1.2(a)(i). Unfortunately the proposed 2008 NZCPS no longer recognises the areas necessary for a species survival (other than habitat) as worthy of protection (Minister of Conservation and Minister for the Environment (2008) *Proposed New Zealand Coastal Policy Statement 2008* (Wellington, New Zealand), Policy 31).

[171] Wallace, P., (2007) The Nature of Habitat *New Zealand Journal of Environmental Law* 11, pp. 211-240 at p. 223.

[172] See for example Dennis, R.L.H., Shreeve, T.G. and Van Dyck, H., (2006) Habitats and Resources: the need for a resource based definition to conserve butterflies, *Biodiversity and Conservation,* pp. 1943-1966 and Hagen, A.N. and Hodges, K.E., (2006) Resolving Critical Habitat Designation Failures: Reconciling Law, Policy, and Biology, *Conservation Biology* 20(2), pp. 399-407 at p. 403.

[173] Ruhl, J.B., (2008) Climate Change and the Endangered Species Act: Building bridges to the non-analog future, *Boston University Law Review* 88(1), pp. 1-63.

A similar approach has been adopted by the USA in its Endangered Species Act 1973 where "critical habitat" is defined as "(i) the specific areas *within* the geographical area occupied by the species…on which are found those physical or biological features essential to the conservation of the species *and* (ii) specific areas *outside* the geographical area occupied by the species…upon a determination by the [Fish and Wildlife Services] that such areas are essential for the conservation of the species".[174] One commentator has stated that this may be an ideal way for Fish and Wildlife Services (the US equivalent to DoC) to respond to "ecological reshuffling" or species movement associated with climate change.[175]

However, the flexibility of these broader definitions of habitat would be severely mitigated by the proviso of "significant" in section 6(c) RMA.

The lack of consistency in approach in deciding what a "significant habitat" encompasses leads to an inconsistent application and protection of habitats from region to region.[176] Although the decision as to whether a habitat is "significant" should be made according to each region, there needs to be a broad framework in place by which to make that decision.

(iii) Conclusion on the adequacy of the selection criteria

As is evident from the various approaches taken on identification of suitable areas for protection, it is important to establish an integrated identification system.[177] This would aid in

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[174] Endangered Species Act 1973 (US), s 1532(5)(A).

[175] Farrier, D., (1995) Conserving Biodiversity on private land: Incentives for management or compensation for lost expectations *Harvard Environmental Law* 19, pp. 303-408.

[176] This has been recognised by the Parliamentary Commissioner for the Environment: "Agencies, such as DOC and local authorities…have a statutory responsibility to conserve and maintain indigenous biodiversity respectively. How those responsibilities should be met…is not, however, specified….This means there is considerable variation in the extent to which agencies around the region, particularly councils, are meeting these responsibilities and showing leadership in biodiversity management. This is reflected in differing levels of effort and significance that councils place on biodiversity management, and the extent to which they explicitly recognise the loss of indigenous biodiversity as a significant environmental issue" (supra note 163, p. 36).

[177] DoC is currently developing a "Natural Heritage Management System" to "create a nationally consistent, scientifically sound system of natural heritage management, enabling prioritisation, planning and monitoring of achievement" (supra note 76, p. 41). The focus of this for 2008-09 includes "identifying priority freshwater and terrestrial ecosystems and their management requirements" (ibid).

identifying areas consistently, with species movement being taken into consideration by all authorities. It would also allow for information and knowledge to be collaborated leading to faster identification of the current status quo after which the focus can move to future needs.

However, these future needs must be taken into account by decision makers in the first place. Due to the uncertainty of both climate change and species movement it is crucial for both DoC and LAs to act by establishing and protecting new areas to accommodate for the moving species, despite these scientific uncertainties. In other words, a precautionary approach needs to be adopted in this decision making.

2. The precautionary approach

The precautionary principle is much debated and has no set definition.[178] In general it is accepted that the underlying idea precautionary principle is "scientific certainty is not required before taking preventative measures"[179] and some form of this should be reflected in environmental law. The precautionary approach is reflected in principle 12 of the NZBS which states that;

> "management actions to conserve…biodiversity should not be postponed because of lack of knowledge, especially where significant or irreversible damage to ecosystems can occur or indigenous species are at risk of extinction."

[178] Mead, S., (2004) Precautionary Principle, *New Zealand Environmental Law* 8, pp. 137-177 at p. 140. It was first expressly recognised in the Rio Declaration on Environment and Development (June 14, 1992) <www.unep.org> accessed 16/09/08 in principle 15: "…in order to protect the environment, the precautionary approach shall be widely applied by States….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 then been various definitions have been provided, both in international documents and national policies (see extensive discussion on these definitions and elements in Mead, S. (2004)).

[179] Supra note 178, p. 144.

(i) Recognition of the precautionary approach under the Resource Management Act

The precautionary approach in so far as it affects biodiversity is reflected under two sections of the RMA. First, the meaning of "effect" includes: any "future effect";[180] "any cumulative effect";[181] and, most importantly for the present purposes, "any potential effect of low probability, which has a high potential impact".[182] Secondly, section 32(4)(b) states that any person proposing to notify, change, or vary a policy statement or plan must carry out an evaluation which includes "the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods".

As mentioned above, inherent in the precautionary approach is the idea that future circumstances need to be taken into account. The RMA makes express reference to the needs of present and "future generations" in its overall purpose section, which all decision makers need to achieve.[183] It also includes elements of futurity in its definitions of "effects".[184]

Both the 1994[185] and proposed 2008[186] NZCPS adopt this precautionary approach in regards to activities with unknown but potentially significant adverse effects to the coastal environment. However, there is a need for such recognition in a NPS which would apply to the terrestrial environment.

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[180] Resource Management Act 1991, s 3(c).

[181] Resource Management Act 1991, s 3(d).

[182] Resource Management Act 1991, s 3(f). Principal Environment Judge Bollard has acknowledged that "The combination of future effects, cumulative effects over time, and potential effects serves to underline the Act's forward-looking intent that, in promoting sustainable management of resources, the desired outcome in that regard will subsist into the foreseeable future" (Bollard, J., (2008) Climate Change from the perspective of the Environment Court, *Brookers Resource Management Bulletin* 7(11), pp. 127-133 at p. 127).

[183] Resource Management Act 1991, s 5.

[184] Resource Management Act 1991, s 3(c).

[185] Supra note 168, Policy 3.3.

[186] Supra note 170, Policy 5.

(ii) Recognition of the precautionary approach under the Conservation Act

In terms of the CA, there is no there is no express mention of acting, or not acting, in the face of uncertainty. However, the RMA definition of "effect" is adopted by the CA.[187]

Further, it is DoC's duty to "manage for conservation purposes"[188] all natural resources (which includes all animals and the land on which they live)[189] to promote the benefits "to present and future generations"[190] as well as "safeguarding the options for future generations".[191] As discussed above for them to fulfil this purpose they will have to take into account the effects of climate change.[192]

The GCP states that "public conservation land may be reviewed from time to ensure that the classification of such lands continues" to, among other things, "*enable specified places to achieve conservation outcomes in the future*".[193] This allows DoC to take into account future habitat needs of species. It would however be positive to see an express provision, if not in the legislation, then under the GCP, that would mandate DoC to take a precautionary approach in the management of all resources for conservation purposes.[194]

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[187] Conservation Act 1987, s 2.

[188] Conservation Act 1987, s 6(a).

[189] Conservation Act 1987, s 2.

[190] Conservation Act 1987, s 6 (c)(i).

[191] Conservation Act 1987, s 2 "conservation".

[192] See above Chapter III, Part A.3.

[193] Supra note 134,Policy 6(b)(vi) (own emphasis).

[194] As pointed out by Warnock and Wheen express legislative recognition of the precautionary principle may be the only way that the issue is adequately taken into account when setting boundaries (supra note 48, p. 537). This is illustrated by the Draft Management Plan for Hector's Dolphins. While it acknowledges the impact of climate change on range distribution, it does not refer to the matter at all in the siting, size and boundary of the proposed new sanctuary (supra note 48, p. 537).

(iii) Conclusion on the precautionary principle

The problem under both schemes is that their recognition, or lack of recognition, of the precautionary principle, does not address the issue of how much precaution should be applied in various circumstances.[195] The case law does not attempt to resolve this problem and instead applies the principle as a "weight to tip the scale in favour of a course for greater protection of the environment".[196] In addition, while the precautionary principle was once defined in light of "foresight" and "forecaring"[197] today it is defined as "determining what risks are acceptable".[198] Therefore, although a futuristic element is still inherent in taking a precautionary approach, this now seems somewhat weakened. How the courts have applied and interpreted the precautionary approach in relation to resource consents and district plan restrictions will be discussed in the next chapter.

PART C - CONLUSION

There has been an ad hoc and inadequate implantation of biodiversity protection across the board, especially at a regional level. This is not aided by the fact that there is a lack of guidance on the issue, both from the legislative frameworks and the national policies under both legislative schemes. The general policy issues raised above will have to be resolved before specific action can be made to establish new areas which may serve as potential future habitats.

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[195] Supra note 178.

[196] Supra note 178, p. 145.

[197] Supra note 178, p. 146.

[198] Supra, note 178, p. 146.

CHAPTER V - THE ESTABLISHMENT OF NEW AREAS

PART A - MOVEMENT FROM PUBLIC TO PUBLIC LAND

1. The extension of areas managed for conservation purposes

If species move or extend their distribution from a park, reserve, sanctuary or other conservation area on to another Crown owned area, then in order to include that land in the park, reserve, sanctuary, or area, the MoC and the Minster responsible for the agency or department that has control over the affected land, can jointly declare the land will be held for conservation purposes.[199] This land can then be given additional protection and become a reserve, sanctuary, refuge, or national park under any enactment administered by DoC.[200]

This is relatively straight forward process, however, the issues outlined in the above chapter will have to be addressed. First, monitoring mechanisms will need to be in place to enable anticipation of the movement as well as to identify the area where the species will move to. As mentioned above, the CGP touches on this idea; in relation to the extension of new areas it states that;

> "public conservation land may be reviewed form time to time to ensure that classification of such land continues…to enable specified places to achieve conservation outcomes in future."[201]

The inclusion of this statement in the CGP may also answer the second issue of whether DoC can order the inclusion of other Crown owned land under the conservation estate for the purpose of any future conservation value it may have. However, in addition to the statement

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[199] Conservation Act 1987, s 7 (1).

[200] Conservation Act 1987, s 18.

[201] Supra note 134, Policy 6(b).

in the GCP above, a strong precautionary approach would need to be adopted in the process of establishing or extending an area for future conservation purposes.[202]

Thirdly, to deal with the issue of species movement, boundaries of conservation land should be more flexible. One solution could be widening the definition of "habitat" as discussed above. [203] This may also bring some flexibility to the decision of extending a boundary of a conservation area, which can be a very slow process.[204]

2. Connecting areas held for conservation purposes

The problem of fragmentation may arise, where two existing conservation areas, one being the old habitat and the other providing a potential future habitat, are not directly adjacent or connected to each other. In this situation connectivity areas such as corridors may have to be established.

Connectivity areas have been acknowledged in various policy statements as suitable mechanisms to protect indigenous biological diversity especially in the coastal environment.[205] However, they are also important for terrestrial species.[206] Many endemic species need large areas as habitats.[207] However, with increased fragmentation "the opportunity to create large new reserves has all but passed".[208] Dispersal corridors therefore

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[202] Supra note 194.

[203] See discussion in above Chapter IV, Part B.1(ii)(d).

[204] This is illustrated by the Banks Peninsula Marine Mammal Sanctuary, which was established in 1988. By 1993 it became evident that the "sanctuary was not extensive enough to provide ideal levels of protection" (Dawson, S. and Slooten, E., (1993) supra note 73, p.216). However, it was not until 2007 that a proposal to extend the sanctuary was made (supra note 21).

[205] Supra note 170, Policy 31(b)(xi).

[206] Although some studies suggest that corridors will only be effective if the species already use corridors for connectivity in real life circumstances i.e. species cannot be made to use corridors unless they already naturally pre-disposed to doing so (Beier, P. and Reed, F.N., (1998) Do Habitat Corridors Provide Connectivity? *Conservation Biology* 12(6), pp. 1241-1252 at p. 1242).

[207] Supra note 22, p. 17.

[208] Supra note 22, p. 18.

provide an important means for such animals to survive in an increasingly fragmented landscape.

The North Island Brown Kiwi is a great example of an animal which relies on connectivity areas to survive as many of the birds are now restricted to "small islands of forest and scrub separated by large tracts of pasture".[209] The venture to provide these connectivity areas is not as demanding as one might think. Even dead vegetation and small forest remnant can provide shelter and dispersal opportunity. Further the corridors between these remnants do not need to be continuous as kiwis have been reported to cross open pastures up to 400m wide.[210] In this way kiwis have been seen to travel up to 1200m.[211]

However, there are problems with connectivity or dispersal corridors as they can also allow for the dispersal of pests.[212] This is especially a problem for the Kiwi whose main perceived threat is predators.[213] Therefore it is important to have in place adequate pest management controls when implementing the connectivity corridors. In addition, the effectiveness of corridors will be very species specific[214] and require much research.

Nevertheless, wildlife corridors are possible. In February 2007 the New South Wales Environment Minister announced the establishment of a record breaking wildlife corridor, spanning 2,800 km along eastern Australia and linking together existing reserves to allow plants and animals to move into new habitats as the continent's climate changes. The areas will be linked solely through voluntary private land agreements with landowners, which will

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[209] Supra note 22, p. 17.

[210] Supra note 20, p. 26.

[211] Supra note 22, p. 22.

[212] Supra note 206, p. 1242.

[213] Supra note 20, pp. 18-21.

[214] Supra note 206, p. 1249.

set out how the landowner will manage the property for the future and bind future landowners.[215]

As recognised by the Australian Governments; to implement these corridors the participation of private landowners will be crucial.[216] The various mechanisms which allow private land to be managed for this purpose will now be examined.

PART B - HABITAT PROTECTION ON PRIVATE LAND

There are two options for private land to be managed for habitat protection purposes. The first option is for DoC and LAs to acquire private land, or an interest in that land, to be managed for habitat protection purposes through freehold title either by purchase (or possibly leasehold), a land exchange or compulsory acquisition. Alternatively, land could be kept under the ownership of the private landholder but nevertheless be managed for conservation purposes either by the landholder, DoC, or by the relevant LA. This is usually achieved by placing a covenant or easement on the land, through a simple agreement with the landowner, or a provision in the district plan which requires habitat protection. If done well, the second option is arguably the best in terms of funding, promoting the integration of sustainability and conservation, and raising awareness of the importance of biodiversity among the public. However, any interference with private land needs to be balanced against the property rights of individuals.[217] This issue will be discussed further in the final Part of this Chapter.

1. Acquisition of land by DoC or LAs for habitat protection purposes

(i) Acquisition of private land for potential future habitat protection

As with the establishment of new conservation areas by acquiring publicly owned land into the conservation estate, the question of whether land can be acquired by DoC for potential

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[215] Wood, S., (2007) Australia plans massive conservation corridor, *Cosmos Online,* 5 March <http://www.cosmosmagazine.com/node/1083> accessed 09/08/08.

[216] Supra note 215.

[217] See Barton, B., (2003) The legitimacy of regulation *New Zealand University Law Review* 20(3), pp. 364-401.

future conservation purposes is also an issue for the acquisition of private land into the conservation estate. Unlike for public conservation land, the GCP does not address this issue. It does state that land acquisition or exchange may be undertaken where it will achieve natural linkages between places and any other purpose allowed for under the Act.[218] This would include the purpose of wildlife movement under wildlife management areas.[219] The proposed NZCPS 2008 also touches upon the issue by stating that LAs shall consider including provisions in plans for financial contribution for applications for the "acquisition of land that provide a buffer against the adverse effect of climate change on the coastal environment".[220]

However, there is no express legal authority on the matter.[221] DoC does have Standard Operating Procedures which regulate land acquisitions, however, the most recent Auditor General Report has criticised the inconsistent procedures used by different DoC conservancies and has recommended that a national strategy be put in place to provide for a more consistent approach.[222] It would no doubt be helpful for the present purposes if this national strategy also clearly stated that land can be acquired for future potential conservation purposes in the light of the uncertainties of climate change and species movement. This would help consolidate the above statements, which already allude to the issue.

(ii) Acquisition by purchase agreement

Both DoC and LAs can purchase land from willing landowners for market value.[223] These transactions differ from DoC conservancy to conservancy and from LA to LA. The land can be purchased through a general agreement of purchase and sale negotiated between the

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[218] Supra note 134, Policy 6(a)(v) and (vii).

[219] Conservation Act 1987, s 23B.

[220] Supra note 170, Principle 29(h).

[221] Although the GCP and the NZCPS are legally binding on the relevant decision makers, they themselves do not have legal status and are dependant on the statutory framework of the CA and RMA respectively.

[222] Controller and Auditor General (2006) *The Department of Conservation: Planning for and managing publicly owned land* Performance Audit Report (Wellington, New Zealand).

[223] Conservation Act 1987, s 7 (2); Local Government Act 2002, s 189(1).

landowner and DoC or the LA. Alternatively, the PWA provides a procedure for the Crown or LAs to acquire land by agreement in relation to "public works".[224] By definition "public work" can be "land held or to be acquired for the purposes of the Conservation Act 1987 or any of the Acts specified in Schedule 1 to that Act"[225] and thus applies to the acquisition of land to protect the habitat of indigenous species.

It is important to note that in the case of some Maori land stricter procedures are laid out in the PWA.[226] Similar procedures will apply for any acquisition of Maori land as the alienation of this land will have to be consistent with the rules set out in TTWMA.[227] Although this dissertation focuses on general land, Maori land will become an important consideration in the future response to coping with species movement onto private land as Maori own the majority of the remaining indigenous forest on private lands.[228] As the law stands at the moment it will be difficult for the Crown or LA to acquire that land for the purpose of potential future habitat protection as there is a strong emphasis in TTWMA on the retention of Maori land in the hand of Maori owners.[229] There is also the issue of unsettled Treaty of Waitangi claims which may arise in relation to the land that is acquired. As pointed out by

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[224] Public Works Act 1981, ss 17 – 21.

[225] Public Works Act 1981, s 2 defines "public work" as every Government Work or use of land for any Government Work that the Crown or any local authority is authorised to "construct, undertake, establish, manage, operate, or maintain" under any Act. And "Government work" includes "land held or to be acquired for the purposes of the Conservation Act 1987 or any of the Acts specified in Schedule 1 to that Act.

[226] The only reference in the PWA to Maori land under s 17 (relating to acquisition by agreement) is that the Minister or LA may apply to the Maori Land Court for an order under Part 9 of the Maori Affairs Amendment Act 1974. However, this Act has been replaced by Te Ture Whenua Maori Act 1993. It is strange that the PWA has not recognised the repeal of the Maori Affairs Amendment Act under s 17, for it has been amended under other sections of the PWA (for e.g. see s 42(a)). The Maori Appellant Court is aware of this issue and has applied TTWMA to s 17 and confirmed that a PWA agreement to taking under s 17(4) does fall under the definition of alienation under s 4 (a)(vi) TTWMA for which confirmation by the Maori Land Court under s 151 TTWMA is required (*Trustees of the Will of Pukepuke Tangiora v Hastings District Council*, Maori Appellate Court, Takitimu, Appeal No 2002/08, 18 Decmember 2002. Williams CJ, Wickliffe J, Carter J,). Therefore any PWA takings (whether compulsory or by agreement) of Maori land will be much more restricted than they were under the old Maori Affairs Amendment Act given the emphasis by TTWMA on retention of land in the hands of Maori owners (see Te Ture Whenau Maori Act 1993, preamble, ss 2 and 7).

[227] See Te Ture Whenau Maori Act 1993, Parts 7, 8, and 9.

[228] Supra note 163, p. 52.

[229] Te Ture Whenua Maori Act 1993, preamble, ss 2 and 17.

the Auditor General Report, some DoC conservancies are wary of entering into land transactions for this reason.[230] A covenant or land management agreement, where the Maori owners retain ownership of the land, would be a more appropriate approach in respect of Maori land. These options will be discussed in detail below. They may also be more appropriate for general land protection as outright purchase of land is financially burdensome and has been recognised by some conservation conservancies as a "less achievable task" in terms of natural resource protection.[231]

(iii) Acquisition by Exchange

Another less financially burdensome option than outright purchase is to exchange conservation land for private land. The MoC can exchange marginal strips and stewardship areas under the CA,[232] and reserves under the RA.[233] Reserves can only be exchanged if the MoC considers it is "for purpose of a reserve or for the improvement, protection, or extension of, or access to, an existing reserve".[234] Similarly, in regards to marginal strips, the MoC must first be satisfied that "the exchange will better achieve the purpose specified" for marginal strips.[235] For stewardship areas, the MoC must be satisfied that "the exchange will enhance conservation values".

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[230] Supra note 222, p. 38.

[231] Supra note 159, Strategy 5.2.3.

[232] Conservation Act 1987, ss 16A(1) and 24E.

[233] Reserves Act 1977, ss 12(1), (3) and 15. To read ss 12 and 15 consistently the statutory interpretation principle of *generalia specialibus non derogant* needs to be applied. According to this common law principle a general provision does not derogate from a specific one (Burrows, J.F., (2003) *Statute Law in New Zealand* (3rd ed, LexisNexis, Wellington, New Zealand), p. 314). Accordingly, the MoC's general powers set out in s 12 to acquire land through exchange by exchanging "Crown land" with any other land, is restricted by s 15 which allows only land held for the purpose of a reserve (and not *any* Crown land) to be exchanged for any other land.

[234] Reserves Act 1977, ss 12 (1) and (3). The approval of the Commissioner of Crown Lands must also be obtained (Reserves Act 1977, s 12(3) and the decision must be notified (Reserves Act 1977, s 15(1)).

[235] Conservation Act 1987, s 14E (e). The purpose of marginal strips include conservation purposes "in particular…the maintenance of aquatic life" and "the protection of the marginal strips and their natural values" (Conservation Act 1987, s 24C).

Reserve purposes do include the preservation, as far as possible, of "indigenous flora and fauna, ecological associations, and natural environment".[236] However, marginal strips are not specifically related to wildlife preservation or protection and stewardship areas constitute residual conservation areas,[237] which are managed so that their natural resources are protected.[238] Stewardship areas can be conferred additional specific protection or preservation requirements by the MoC, including any reserve, sanctuary, refuge, or park relevant to wildlife preservation and/or protection.[239]

If the land the species has moved from has any additional protection, which is most likely the case, this additional protection will first have to be removed in order for it to be exchanged as a stewardship area.[240] As pointed out by Warnock and Wheen, this unnecessarily complicates the procedure.[241] Further, it seems impractical that wildlife management areas are not specifically included in land exchange, even though these areas are the only conservation areas where the capacity of wildlife movement is a specific consideration for their management.[242]

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[236] Reserves Act 1977, s 20 "nature reserves".

[237] Conservation Act 1987, s 2 "Stewardship area" means a conservation area that is not marginal strip, or a watercourse area, or land, or an interest in land, held under the Conservation Act 1987 for the purpose of a conservation park, an ecological area, a sanctuary area, a wilderness area, or for any other specified purpose (Conservation Act 1987, s 18 (1)).

[238] Conservation Act 1987, s 25.

[239] Conservation Act 1987, s 18.

[240] It is unclear whether this would even be possible, considering that it is likely that the old habitat will still have a conservation purpose after having been managed for this purpose for some time. The CA does not provide any guidance about revocation of a special protection classification afforded to a conservation area under s 18(7). Presumably a similar procedure to disposal of conservation areas would be imposed (see below).

[241] Supra note 48, p. 536.

[242] Conservation Act 1987 s 23B and supra note 48, p. 536.

(a) Exchange and the rules of disposal

If land is to be exchanged for private land, the question arises whether the rules of disposal apply to this exchange. This is further complicated by the fact that what rules will apply will depend on under what Act the land that is to be exchanged is held.

The land to be exchanged may be held under CA, which states that "no conservation area or interest in a conservation area shall be disposed of except in accordance with this Act".[243] The CA expressly allows the MoC to dispose of any stewardship area (other than foreshore) after public notification.[244] However, he cannot dispose of a stewardship area if it lies adjacent to any conservation area, which is not a stewardship area,[245] or land that is administered by DoC under some other enactment, unless he is satisfied that;

> "its retention and continued management as a stewardship area would not materially enhance the conservation or recreational values of the adjacent conservation area or land or, in the case of any marginal strip, of the adjacent water, or public access to it."[246]

Although it is not expressly stated in the legislation, these rules of disposal of conservation land, especially in the case of stewardship areas, are likely to apply to exchange. This is consistent with the view of the High Court in *Buller Electricity Ltd v Attorney-General*[247] where it was held that;

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[243] Conservation Act 1987, s 16(1).

[244] Conservation Act 1987, ss 26(1) and (3).

[245] Conservation Act 1987, s 26(2) (a).

[246] Conservation Act 1987, s 26(2)(b).

[247] [1995] 3 NZLR 344.

> "when the Act is looked at as a whole, there is no basis which the Minister could sell the land *or otherwise dispose* of it, unless he was satisfied that it was no longer required for conservation purposes."[248]

It is questionable whether this test would be satisfied in the case of species movement, for although the species will move onto a new area leaving the old habitat redundant of use, it is likely that the old habitat will still have a conservation purpose after having been managed for this purpose for some time.[249] This problem may be solved by DoC's Standard Operating Procedures on Exchange, which suggest that land that still serves the purpose under an Act (i.e. the old habitat) can be used in an exchange if the land it is being exchanged for has a higher value for the purpose specified in the Act (i.e. the new habitat).[250] However, since there is no specified purpose in the Act for potential future habitats it is unlikely this land will meet the requirement.

Alternatively, the current protected habitat may be held under the PWA as a "public work". If this land is no longer required for that public work or any other public work it must first be offered for sale to the formal owner of that land unless the Chief Surveyor (under Survey Act 1986) or LA considers this impractical, unreasonable, unfair, or there has been significant change in the character of the land for the purposes of the public work for which is was

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[248] Supra note 247, p. 325 (own emphasis). See also General Conservation Policy Chapter 6 Policy 6 (c): Land disposal may be considered where the legislation to which it is subject allows for disposal and the land has no, or very low, conservation values. Policy 6(d) states that, subject to Policy 6 (c) land should not be disposed of where it has "international, national or regional significance"; or "is important for the survival of any threatened indigenous species"; or "represents a habitat or ecosystem that is under-represented in public conservation lands or has the potential to be restored to improve the representation of habitats or ecosystems that are under-represented in public conservation lands"; or "improves the natural functioning or integrity of places"; or "improves the amenity or utility of places"; or "improves the natural linkages between places"; or "secures practical walking access to public conservation lands and waters, rivers, lakes or the coast" (supra note 134).

[249] Supra note 48, p. 536.

[250] Department of Conservation (2008) *Exchanges of Land Standard Operating Procedure* (unpublished), printed on 07/08/08, p. 1. However, the Standard Operating Procedure recognises this is not a statutory requirement and the approach should be considered on a case by case basis having regard to the stated intention (ibid, p. 1).

required.[251] This indicates that exchange under the PWA would not be a viable option for it would defeat the purpose of an exchange for any public works if the former owner's current land is not the land which is needed for the new public work. Thus it would seem that if land is held for conservation purposes under the PWA, a simple exchange is not possible, rather a two stage process is required: First the land, which is no longer required, must be offered to the former owner, and then the new land must be acquired via purchase. This process seems unduly complicated, especially in light of the fact that under the CA, land held for conservation purposes can be disposed off in an exchange to any person.[252] It seems impractical that two different rules should apply to land held for the same purposes.

(iv) Compulsory Acquisition

Obviously, purchase and exchange of land will not work if the private landowner is unwilling to sell or exchange his land. The PWA provides the legal mechanism for compulsory acquisition or land "taking".

There are two overlapping approaches DoC can take to compulsory acquire land under the PWA for habitat protection. First, under the RA and NPA the MoC may take land under the PWA for the purpose of a reserve,[253] including nature reserves which protect and preserve important indigenous species and habitats,[254] or national park.[255] Secondly, land can also be

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[251] Public Works Act 1981, s 40. The same applies to land that was, immediately before its taking or acquisition, Maori Freehold land or General land owned by Maori (see Te Ture Whenua Maori Act 1993 s 4 and Part 6 for definition of these land classifications) and beneficially owned by more than 4 persons and not vested in any trustee (s 41 Public Works Act 1981). See also Bill Public Works (Offer Back of and Compensation for Acquired Land) Amendment Bill 2007 which intends to strengthen the position of former Maori owners in their entitlement to land which is no longer required under the Public Works Act 1981.

[252] Conservation land is not subject to the Public Works Act 1981 and the adoption of the Public Works Act 1981 is a voluntary approach (supra note 88, p. 446).

[253] Reserves Act 1977, ss 186 and 197.

[254] Reserves Act 1977, s 20.

[255] National Parks Act 1978, s 9(1)(b).

taken for any other purpose under the CA or any of the Acts specified in its Schedule 1 under the PWA as a "public work".[256] LAs also have the power to take any land under the PWA.[257]

The PWA provides that where land is to be taken for public works, the MoC or LA must publish a notice in the *Gazette* stating why the taking of the land is considered "reasonably necessary",[258] and serve the owner and persons with a registerable interest in the land with a notice of the intention to take the land.[259] Full compensation calculated at market value is available to the landowner.[260] Alternatively, the persons who have been served with a notice of intention may object to the taking of the land to the Environment Court.[261]

The Environment Court in *Waitakere City Council v Brunel*[262] inquired into such an objection.[263] On appeal the High Court held that it was up to the Council, not the Court, to devise the objective for the taking. The objective should not be construed too narrowly for there may still be further planning to do and the Council is entitled to change its mind on whether the land is actually needed for the objective.[264] Importantly, the Court emphasised that "the Council's responsibility transcends the here and now; its role is to plan for the

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[256] See supra note 225, re: definition of "public work". Since Schedule 1 of the Conservation Act 1987 includes the Reserves Act 1977 and the National Parks Act 1978, the express provision under these Acts for compulsory acquisition of land for the purpose of a reserve seems somewhat superfluous.

[257] Local Government Act 2002, s 189(1).

[258] Public Works Act 1981, s 23(1)(b)(iii).

[259] Public Works Act 1981, s 23(1)(c).

[260] Public Works Act 1981, s 62(1)(b). Note if only some of the land is taken then the value is calculated by determining the market value of the whole of the owner's land and deducting from it the market value of the balance of the owner's land after the taking or acquisition (Public Works Act 1981, s 62(1)(b)(ii)).

[261] Public Works Act 1981, s 23(3).

[262] [2007] NZRMA 235.

[263] The Environment Court held that it must take a three step inquiry into such an objection (This three step inquiry is based on Public Works Act 1981, s 24(7)): First, to ascertain the objectives of the Council; secondly, to examine the adequacy of its consideration of alternatives; if it is inadequate it will send the decision back to for further consideration, if not it will go onto the third inquiry of whether the Minster or LA's decision was fair, sound, and reasonable (see supra note 262, para 21, and Public Works Act 1981, s 24(7)). Although the High Court upheld this three stage process it overturned the Environment Court's findings on the three stages.

[264] Supra note 262, para 45.

future. The Council is entitled if it wishes, to act boldly to ensure that the future needs are accommodated".[265] Thus in the *Waitakere Case* the Council was entitled to acquire land under the general objective of possible future parking even though this land may not be needed in the future for this purpose due to other possible reclamations, in which case the land would be returned to the owner.[266] Lastly, it was decided that "reasonably necessary" did not mean the taking was essential[267] nor does it mean that no other alternative was available.[268]

This decision looks promising in that it allows LA, and presumably Ministers, broad powers to compulsory acquire land for possible future events, such as potential habitat for indigenous species.[269]

2. Managing land for conservation purposes but kept under private ownership

(i) Voluntary covenants, easements and agreements

DoC can implement conservation covenants and Nga Whenua Rahui Kawenata (covenants over Maori land) to protect the habitat of endangered fauna and flora.[270] These can be established over any land for conservation purposes under both the RA[271] and CA[272] and will

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[265] Supra note 262, para 47.

[266] Supra note 262, para 45, and Public Works Act 1981, s 40.

[267] This is in light of the fact that Public Works Act 1981, s 22, which used to require the taking to be "essential", has now been repealed (supra note 262).

[268] Supra note 262 .

[269] Supra note 262, para 47. The reasoning for this wide authority is the fact that the council is a democratically elected body, subject to review by the Environment Court according to the criteria that the power be implemented fairly, soundly and reasonably.

[270] Booth, K. and Bellingham,. (2004) Public access and protection on private land *Handbook of Environmental Law,* Harris, R (Ed.), (Royal Forest and Bird Protection Society of New Zealand Inc, Wellington, New Zealand), pp.428-443 at p. 441.

[271] Reserves Act 1977, ss 77 (conservation covenants) and 77A (Nga Whenua Rahui kawenata).

[272] Conservation Act 1987, ss 27 (conservation covenants) and 27A (Nga Whenua Rahui kawenata).

run with the land binding future owners.[273] Covenants ensuring indigenous forest and shrubland is not cut down are very important for the survival of the Kiwi.[274] Similar covenants can also be secured by LA as resource consent conditions. These will be discussed in detail below.

There are also "open space" covenants administered by the Queen Elizabeth II National Trust, which is a private organisation. These are designed to preserve special features and indigenous vegetation and habitat[275] and have been recognised as playing a significant role in the often fragmented and substantially privately owned indigenous lowland habitats.[276]

Both the CA and the RA also provide for private land agreements[277] and management agreements.[278] These agreements are very flexible and range from giving the private land reserve status,[279] any other conservation status,[280] or simply managed for any conservation purpose[281] as agreed between DoC and the landowner for any given time. The WA also

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[273] Conservation Act 1987, s 27(1)(b), Reserves Act 1977, s 77(4). The binding nature is an important consideration in ensuring the efforts of habitat protection by one owner are not simply frustrated by a future owner once that area is sold on.

[274] Supra note 20, p. 26.

[275] Queen Elizabeth II National Trust Act 1977, ss 20 and 2.

[276] Donoghue, L.D., (2003) The Law and Practice of Open Space Covenants *New Zealand Environmental Law Journal* 7, pp. 119-168 at p. 164.

[277] Reserves Act 1977, s 76, and Conservation Act 1987, s 29.

[278] Reserves Act 1977, s 38.

[279] Reserves Act 1977, s 76.

[280] Conservation Act 1987, s 29.

[281] Reserves Act 1977, s 38, and Conservation Act 1987, s 29.

provides legal protection of wildlife within their habitats on private land through wildlife management sanctuaries, management reserves, and refuges.[282]

LAs can also enter into property management agreements with landowners.[283] As with Doc agreement, any conditions can be attached to these agreements, but they usually involve predator control and threshold clearance rules.[284]

(ii) The advantages and disadvantages of voluntary agreements

The success and trigger of these voluntary agreements and covenants is usually dependant on the goodwill and willingness of the landowner. However the problem inherent in this is the land that is needed for potential future habitat protection will not necessarily be that of a willing landowner, nor may that willing landowner be willing enough to agree to management to the extent required for effective protection. This is acknowledged as a major problem, especially for "open space" covenants.[285]

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[282] Sanctuaries are registered against the land title, bind future owners, and provide for absolute protection of the wildlife with conditions on management and access negotiated between DoC and the landowner (Wildlife Act 1953, ss 9 and 10). A sanctuary can be established without consent from the landowner, in which case the PWA provisions outlined above apply (Wildlife Act 1953, s 9(5)). Wildlife management reserves offer similar protection to sanctuaries, however reserves are preferred where public access is regarded as an important part of the reserve (supra note 270). Wildlife refuges provide a lower level of protection than sanctuaries and reserves and will not bind future owners and can be revoked at any time (Wildlife Act 1953, s 14A). Both refuges and reserves may receive rating relief (supra note 270). They also have the added benefit of allowing DoC to take care of the management and its expenses.

[283] Supra note 121.

[284] Supra note 121.

[285] The passive approach taken by the National Trust in actively identifying potential areas for protection leads to one of its "major issues" that "landowners willing to protect their areas of natural value are not always those that have the most significant sites"(supra note 276, p. 136). This passive approach is inconsistent with the Trust's functions (see Queen Elizabeth the Second National Trust Act 1997, s 20(2)(d) as part of its functions the trust shall "undertake the identification and classification of potential reserves and recreation areas as being of national, regional and local or special significant," and s 20(2)(b) to make recommendations of these areas to the appropriate Ministers and government departments as to these areas and the method of protection that should be used).

The problem is mainly attributed to the limited compensation available for these agreements and covenants.[286] Covenants and agreements administered by DoC are usually subsidised at the outset by DoC administered funds such as the Nature Heritage Fund or Nga Whenua Rahui.[287] Some LAs also have funds to provide for rating relief and fencing subsidies under their agreements and covenants.[288] Similarly, assistance is given to the landowner by covering the cost of establishing an "open space" covenant, such as fencing. However, there is no relief for the ongoing management expenses of protecting a native habitat to the level necessary to ensure adequate protection of often vulnerable native species. Without these adequate incentives, landowners will either not enter into voluntary agreements as the cost of upholding them is too high, or, if they do enter into agreements, they may not have the funds to sufficiently manage the land to adequately provide for the species.

These issues are not limited to New Zealand; one commentator from the US states that monitoring, identification, ongoing management, and financial support are a big problem in the implementation of conservation easements.[289] However, both in New Zealand and overseas, the advantages of these private trusts and voluntary agreements are acknowledged and valued. These advantages are mainly related to the fact that private organisations can negotiate with private landowners "against the backdrop of govt regulation, while still remaining committed to a philosophy of voluntariness and cooperation".[290] This is in contrast to the government, which "will never be able to escape completely from being perceived in terms of its regulatory persona, even where it approaches with offerings rather than threats".[291] Similarly, voluntary agreements have the advantage of letting the landowner be in control of

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[286] Supra note 276.

[287] Supra note 273, p. 441.

[288] Supra note 121.

[289] Supra note 175, pp. 347-349. Conservation easements are the US equivalent of New Zealand conservation covenants.

[290] Supra note 175, p. 350.

[291] Supra note 175, p. 350.

how much protection he or she is willing to undertake leading to an increased chance of success as he or she will not feel aggrieved by unwanted interference.

Private trusts and voluntary agreements are thus often seen as a great middle ground for the protection of habitat on private land. However, in order to ensure that right land is managed to provide for the needs of moving species, a sticks and carrots approach is required. This means both sufficient incentives need to be available to landowners to enter into the agreements and then manage the land adequately, as well as regulation and mandatory covenants to ensure the appropriate land is protected. The issue of incentives will be examined in the last Part of this Chapter. The possibility of regulatory control through district plans, and mandatory covenants attached to resource consents will now be discussed.

(iii) Regulatory control to protect potential future habitats - conditions on resource consents

Conditions can be attached to any resource consent[292] or subdivision consent[293] where these are necessary as part of avoiding, remedying, or mitigating adverse effects of an activity or subdivision. These can be secured by a covenant, which runs with the land and binds future owners.[294]

(a) Types of conditions

In a case where an activity is proposed by a landowner, which threatens a future potential habitat on his land, the LA could attach a condition on the consent that he restore, protect or

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[292] Resource Management Act 1991, s 108(1).

[293] Resource Management Act 1991, s 220.

[294] Resource Management Act 1991, ss 108(2)(d) and 221(4), see also *Morgan v Whangarei District Court,*(unreported) HC Whangarei, A21/2007, 23 November 2007, Priestly J.

establish a habitat,[295] and/or manage the habitat to offer adequate protection including pest and weed management.[296]

In *Director-General of Conservation v Marlborough District Council*[297] the condition on the consent went as far as attaching a precautionary adaptive management condition as a condition precedent. This enabled a survey to be conducted for several years to ensure the Hector's dolphin habitat would not be adversely affected by the proposed mussel farm before the activity was allowed. In the case of there being an adverse effect on the dolphins the resource consent would be stopped. It is arguable that this approach could be used in the case of limited knowledge as to the effect of an activity on a potential future habitat.

Councils can also expressly provide in their plan for a condition attaching to any resource consents or subdivision consent for a reserve contribution.[298] This can be in the form of

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[295] Resource Management Act 1991, s 108(2)(c).

[296] See for example *Morgan v Whangarei DC,* (unreported) HC Whangarei, A21/2007, 23 November 2007, Priestly J. In this case one of the conditions attaching to the consent was to plant native trees. This would be useful in the case where there is no or limited vegetation on the property that could serve as a potential future habitat.

[297] [2004] 3 NZLR.

[298] Resource Management Act 1991, s 108(2)(a). A "development contribution" for a reserve can also be required under the Local Government Act 2002 if the a subdivision or development generates demand for such a reserve (Local Government Act 2002, s 197(a)). However, these reserves are very people orientated. In *Neil Construction Ltd v North Shore City Council* ([2008] NZRMA 275 (HC)) the council conducted surveys in the community to gauge whether the new development generated a demand among people for reserves for fitness, recreation and visual amenity (*Neil Construction* at paras 237-239). This is consistent with the purpose of the Local Government Act 2002, which is to "promote the social, economic, environmental, and cultural wellbeing of *communities*"(Local Government Act 2002, s 3 (own emphasis)). Further the activities for which a development contribution is sought must be separately identified and calculated to a high degree of specificity in the development contribution policy (Local Government Act 2002, ss 197(b) and 106). It is thus highly unlikely that such a contribution could be used to fund future reserves that may provide potential future habitats. An application for a subdivision with allotments of less than 4 hectares usually triggers a requirement for an esplanade reserve (Resource Management Act 1991, s 229 (a)(iii) and esplanade reserves' purpose includes "maintaining or enhancing aquatic habitats") along mean high water springs of the sea and along the bank of a river. This reserve can be taken for conservation purposes (Resource Management Act 1991, s 229) and is vested in and administered by the territorial authority (Resource Management Act 1991, s 231). Esplanade strips can also be created for the conservation purposes, however the land is not vested in the territorial authority and remains in private hands. These reserves can also be required if the allotments are 4 hectares or more but only if it is expressly required by the district plan (Resource Management Act 1991, ss 77(2) and 230(5)). In this case the registered proprietor will be compensated (Resource Management Act 1991, s 237F).

money or land,[299] however most councils prefer a monetary contribution.[300] It is only just recently that councils have used these funds to protect conservation values.[301]

(b) Possible problems with conditions protecting potential future habitats

Before any conditions can be imposed against an unwilling landowner, the *Newbury Test*[302] must be satisfied. This states that there must be a link between the proposed activity and the condition.[303] This link does not need to be causative; rather the local authority must ensure the condition it imposes is not unrelated to the activity.[304] Whether or not this test is satisfied is very factually specific and it is uncertain whether conditions to protect potential future habitats, which may or may not be affected by the proposed activity, would be related enough to be upheld on appeal.

Recently the courts have allowed conditions which would mitigate adverse effects off-site as well as conditions which are effectively unrelated to the activity. In the case of *JF Investments Ltd v Queenstown Lakes District Council*[305] the applicant offered to "mitigate" the adverse visual amenity effects of a house on an outstanding natural landscape by funding the removal of wilding pines in the area of Queenstown. This was accepted by the Environment Court to be adequate "environmental compensation"[306] because both impacted upon the same natural resource – the landscape – and thus the negative effect of the building on the landscape was off-set by the positive effect of removing the pines from the landscape.

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[299] Resource Management Act 1991, s 108(9). With the exception of Maori land.

[300] See for example Watiakere City Council (2003) *Waitakere District Plan - The subdivision process* (Auckland, New Zealand), p. 1.

[301] Supra note 270, p. 440.

[302] *Newbury District Court v Secretary of State of Environment* [1981] AC 578, confirmed in *Waitakere City Council v Estate Homes Ltd* [2006] NZSC 112.

[303] Supra note 302. The consent must also be for planning purposes and not so unreasonable that no planning authority could have imposed them (Supra note 302).

[304] *Waitakere City Council v Estate Homes Ltd* [2006] NZSC 112.

[305] (unreported) Environment Court Christchurch, C48/2006, 27 April 2006, Jackson J.

[306] In some jurisdictions this is also called "biodiversity offsets".

Such a wide approach could allow conditions to be put on consents for the establishment, or contribution towards the establishment, of a future habitat even if the activity might not yet have any known effect on it, as long as it has some sort of effect on a habitat on site. The problem with this approach is that in the case of *JF Investments* it was the applicant who put forward the conditions. The Court suggests a council may be unable to put forward similar conditions as the *Newbury Test* might not be satisfied.[307]

It is also important to note any condition can only be implemented to the extent of the discretion in the rules under the relevant plan.[308] Habitat protection will thus only be provided for if, and when, a resource condition for a subdivision or other activity arises where this activity is a discretionary activity and the discretion includes the protection of habitat in the plan. Further, this discretion would have to reflect a precautionary approach as it would not be for the protection of current habitat but for the protection of potential future habitat. As discussed above the RMA does allow for a precautionary approach to be taken in plan preparation.[309] However, how much precaution should be applied in various circumstances is decided on a case by case basis.[310]

There has been much litigation in respect of the RMA's treatment of the precautionary principle, especially in cases where councils have adopted the principle in their plan and have denied resource consents pursuant to this. The courts are reluctant to take a strong precautionary approach (i.e. allowing no activity until there is proof no risk will occur) and have justified risk when it is consistent with section 5. The precautionary approach is further weakened by the fact that there are many competing interests in Part II of the RMA, the

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[307] Supra note 305, paras. 19, 41 and 53.

[308] See Resource Management Act 1991, ss 77B – 77D.

[309] Resource Management Act, ss, 3, 5, and 32(4)(b).

[310] Supra note 178.

protection of biodiversity being only one of these. This is further exacerbated by the holding that mitigation of an effect is enough.[311]

In many cases risk will be justified so long as it is monitored and the activity is implemented over a number of stages. For example, in *Clifford Marine Farms* the Director General argued against the establishment of a large marine farm in the middle of "prime Hector's Dolphin habitat"[312] on the basis that even though "the definite effects of a marine farm on Hector's Dolphin have not been established, there are potential effects which, if they do materialise, will be of very high impact".[313] The applicant argued successfully that there was insufficient scientific evidence to support the precautionary approach reflected under s 3(f) and even if the effects did arise they would be adequately remedied by the staged implementation, monitoring, and review conditions issued under the resource consent.

In light of the uncertainty whether a condition to protect potential future habitat would be imposed it is highly likely the landowner would be able to stall the implementation of the condition by appealing them.[314] This could lead to a very lengthy process and in the end the landowner may still frustrate the condition.[315] Similar problems arise in regards to restrictions in district plan provisions.

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[311] *Trio Holdings Ltd v Marlborough District Council* [1997] NZRMA 97.

[312] *Clifford Bay Marine Farms Ltd v Marlborough District Council* (unreported), Environment Court Christchurch, C131/2003, 22 September 2003, Jackson J, p. 3.

[313] Supra note 312, pp. 5-6.

[314] Resource Management Act 1991, ss 120 and 121.

[315] In *Morgan v Whangarei District Council* (supra note 294) while the HC was still considering whether the conditions to protect the vegetation on his land were valid, Mr Morgan cut down all the trees. Because the vegetation was not expressly protected in the district plan and the conditions had not been given effect this was a perfectly "legal" action.

(iv) Regulatory control to protect potential future habitats - restrictions in district plans

(a) Significant Natural Areas

As discussed in the above chapter, LAs usually implement their obligation to protect indigenous habitat through SNAs. These areas are then listed on the district plan.

There has been some controversy over using SNAs in district plans, mostly related to landowners' views on government interference with their property rights.[316] This has led to agreements between LAs or DoC and landowners being more acceptable and popular.[317]

However, it has been recognised by the courts that, especially in lowland areas where agreements are not entered into as frequently, an approach "geared to more comprehensive scheduling" of significant areas needs to be adopted.[318] Thus in *Minister of Conservation v Western Bay of Plenty District Council*[319] the court held that not just "exceptional/outstanding" and "very high/high" areas, but also areas acknowledged as having "high" or "moderate high" level of significance, should be added to the schedule under the district plan in order to be protected. Again, however, it will still be debatable whether, without an adequate precautionary approach being taken, areas could be scheduled as SNAs which do not have high or even moderate high significance currently, but do have the potential for this later on as they become habitats. This will increase the chances of a successful challenge to a district plan provision. The RMA allows a landowner to challenge a provision in a plan if it renders his land "incapable of reasonable use" and/or "places and unfair and unreasonable burden" on him.[320] The courts have not applied this as a very burdensome test.[321] It is highly likely a provision requiring a landowner to protect an area

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[316] Supra note 121, p.396, and supra note 89, p. 179.

[317] Supra note 121.

[318] Supra note 98.

[319] Supra note 98.

[320] Resource Management Act 1991, ss 85(2) and (3).

[321] *Steven v Christchurch City Council* [1998] NZRMA 289.

which may or may not provide a future habitat will be seen as unreasonable, especially considering the financial burden on the landowner.[322]

There is, however, the possibility to include rules about management of native areas on private land in plans and polices even if they have not been identified as a SNA.[323] For example, a plan can impose land use control for example on the removal of vegetation.[324]

(b) Designation under the Resource Management Act

Designations could potentially be a very useful tool for setting aside possible habitats for species to move on to in the future. Designations are areas included in district plans which are reserved or set aside by an "acquiring authority"[325] for the purpose of a particular public works to be carried out on it sometime in the future. [326] Once a designation is included in a district plan no resource consent is required for any "public work" in relation to land use consistent with the designation and, more importantly, no one may do anything with the land that would hinder or prevent the proposed work without written consent from the requiring authority.[327] Although it is best for designations to be described in some detail in the plan, often it is quite general to maximise the flexibility of the designation.[328]

So far designations look like a promising tool to provide for potential future habitat protection where this is already established on the land. It would require the owner to leave the areas as they are in case they could provide for habitats in the future.[329] However, presumably most

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[322] In *Steven v Christchurch City Council* (supra note 321) this was seen as a decisive factor for the court to hold the restriction on a heritage building and the cost involved in renovating it was both unreasonable and unfair.

[323] Supra note 89, p. 182.

[324] Supra note 89, p. 182.

[325] Resource Management Act 1991, s 167 defines "acquiring authority" as a Minister of the Crown, a local authority or a network utility operator that has gained approval of the Minister for the Environment.

[326] Resource Management Act 1991, ss 166 and 168.

[327] Resource Management Act 1991, s 176(1).

[328] *Waitakere City Council v Minister of Defence* [2006] 253.

[329] Although it would probably not force the landowner to manage the land actively.

land owners will not look favourably on this interference to their land. Unlike conditions on resource consents, the RMA provides for the compensation of owners of land who might be adversely affected by having a designation over their land by applying to the Environment Court and forcing the requiring authority to lease or acquire the land under the PWA and to provide for appropriate compensation.[330] Unfortunately this often results in the requiring authority withdrawing the designation and thus frustrating the whole purpose of tentatively putting aside an area in case it is needed in the future.[331]

3. Conclusion

As recognised above, the participation of private landowners in the effort to protect and preserve indigenous habitat is fundamental to the success of halting biodiversity decline.[332] This is amplified by the impacts of climate change on biodiversity leading to a need for more areas to be prepared for potential future habitats. However, landowners must be willing and accepting in doing so.[333] This will be a major obstacle if inadequate incentives are available for landowners to take part in managing their land for conservation purposes. Similarly, landowners are likely to appeal decisions for compulsory restrictions or takings placed on their land by resource consent conditions, designations, district plan significant natural area provisions, or public works if there is insufficient compensation for such restrictions. The form these incentives and compensation should take will now be discussed.

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[330] Resource Management Act 1991, s 185(1). This will be granted if the owner can show that they have tried to sell the land at market value as if the designation had not been made (Resource Management Act 1991, s 185(2)).

[331] *Queenstown Airport Corp v Skipworth* [2001] 2 NZLR 621.

[332] See for example Voigt, who states that: "[M]any species and assemblages are only (and were ever only) present in areas outside the public conservation land and are therefore subject to permanent destruction…Since the public area of land set aside for conservation purposes is limited, biodiversity will certainly continue to decline unless those who hold land in their private property or tenure are willing to assume a fair amount of responsibility and understand and act according to the need to protect to biodiversity…Farmers, corporate and private landowners can make an important contribution to conservation by protecting indigenous areas on their land. However, successful protection or conservation of natural habitats requires willing and motivated landholders as an essential prerequisite" (Supra note 89, p. 170).

[333] Supra note 332.

PART C - INCENTIVES AND COMPENSATION

1. What type of compensation/incentive is necessary to ensure adequate biodiversity management on private land?

Although there are various reasons why landowners protect biodiversity on their land, a recent study has shown the majority of landowners are motivated by financial considerations.[334] It is also accepted that command and control regulation on its own is not sufficient in respect of land management.[335] This needs to be combined with adequate financial incentives to induce landowners to manage their land appropriately and discourage them from challenging the interference on their land.[336] Thus there needs to be some background regulatory rules within which agreements can be negotiated.[337] This will ensure an adequate level of management is reached and the right land is being protected.

The contentious issue is inherent in the word "compensation". The argument against "compensation" has come from many different backgrounds: From the practical arguments that once regulators have to pay compensation every time they regulate they will become reluctant to do so;[338] to the ethical arguments of contractarianism or utilitarianism that a landowner "giving up a significant value for the public good should not be rewarded for such a socially moral action" or that a "particular system of collectively enforced social arrangement is legitimate since it is the object of an agreement for the people who are subject to it" respectively;[339] and most importantly the argument that because compensation is

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[334] Cocklin, C. and Doorman, P., (1994) Ecosystem Protection and Management in New Zealand: A Private Law Perspective *Applied Geography* 14 (3), pp. 264 -281 at pp. 272 and 274, and Kabii, T. and Horwitz, P., (2006) A review of Landholder Motivations and Determinants for Participation in Conservation Covenant Programmes *Environmental Conservation* 33, pp. 11-20.

[335] Supra note 175, p. 391.

[336] Supra note 175, p. 391.

[337] Supra note 175, p. 391.

[338] Supra note 175, p. 396.

[339] Ryan, K., (1998) Should the Resource Management Act 1991 Include a Takings Regime? *New Zealand Environmental Law Journal* 2, pp. 63-91 at p. 71.

backward looking and does not provide landowners "some degree of ownership of the issue of biodiversity conservation and a real stake in addressing it," it allows landowners to "wash their hands" of future land management.[340] This is not ideal when the whole purpose of managing the land in the present case would be for the potential of it providing a future habitat.

However, the problem remains that "disgruntled landowners make poor conservationists".[341] Thus it is has been acknowledged that there should be a shift from the traditional sense of compensation to a new form of financial inducements for biodiversity management in the form of "stewardship payments".[342] These payments would recognise

> "an ongoing process of land management and landowner economic hardship…[and]…encourage landowner to embrace active conservation management, and to perceive endangered species as assets rather than liabilities."[343]

Stewardship payments would therefore not only encourage and develop a positive land ethic but also provide a source of income for landowners, which would in turn internalise the issue of biodiversity protection.[344] As a result they could present a possible remedy to the problem of externalities recognised in the NZBS, which states that;

> "[i]n many cases, the true value of biodiversity is not accounted for in the market because most of the benefits of biodiversity are externalities with low or zero market

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[340] Supra note 175, p. 397, and supra note 339, p. 76. Another potential solution to internalise biodiversity values is to follow a similar conservation trading scheme as developed by the US and Australia under their biodiversity offset schemes (see Clean Air Act 1990 (US), s 404, and Endangered Species Act 1973 (US), Threatened Species Conservation Amendment (Biodiversity Banking) Act 2006 (NSW) and discussion in Kerry ten, K., Bishop, J. and Bayon, R., (2004) *IUCN Biodiversity Offsets: Views, experiences, and the business case* <www.iucn.org/themes/business/ biodiversity offsets> accessed 17/09/08, and Barrie, N., Memon, A. and Skelton, P., (2004) *An International Perspective on Environmental Compensation: Lessons Learnt from New Zealand's Resource Management Regime*, Research Monograph (Environment Society and Design Division, Lincoln University, Christchurch, New Zealand).

[341] Supra note 175, p. 397.

[342] Supra note 339, p. 76.

[343] Supra note 339, p. 76.

[344] Supra note 175, pp. 400-404.

value. Methods of valuation are needed which allow markets to take better account of the true value of biodiversity and to assess the impacts of human activities on biodiversity. Linked to this is a need to increase the use of incentive mechanisms to encourage and reward the sympathetic management of biodiversity".[345]

2. The problem of funding – who should pay?

The obvious problem is who will provide the extra funding for these stewardship payments. Practically speaking, given the $8 million dollar forecast budget cuts for DoC over the next 3 years[346] and the fact this has been attributed by some to the Governments policy of buying up high country farmland for the conservation estate and the resulting new maintenance costs,[347] it is unlikely DoC is in the best position to fund the purchasing of more private land or fund the maintenance of conservation values on private land. In fact, currently, only 2-3% of DoC estate (30%) is managed intensively for biodiversity protection due to its limited funding and capacity.[348] The funding of private independent funds and trusts such as the QEII National Trust and Nature Heritage Fund are also under pressure with demand outweighing supply.[349]

It is therefore now more important than ever for private landowners, community groups, and, most importantly, LAs involvement, who have the potential to provide both regulation and incentives for the management of biodiversity on private lands. LAs also have the option of increasing funding from any one of their sources including general rates, targeted rates,

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[345] Supra note 118, Theme 9: Information, Knowledge and Capacity, at p. 109.

[346] Mcneilly, H., (2008) DoC's $8million dollar deficit – job losses loom, *Otago Daily Times,* 14 February.

[347] New Zealand Energy and Business Week (2008) *CONSERVATION: Govt 'Land Grab' To Blame for DoC's Budget Woes,* 30 April.

[348] Supra note 122, p. 2.

[349] Supra notes 276 and 89, p. 195. The Nga Whenau Rahui is an option for the protection of indigenous habitat on Maori land. Like the Nature Heritage Fund, it is serviced by DoC and receives an annual allocation of funds from the government.

development contributions, and financial contributions so the community is involved indirectly in preserving biodiversity in the region.[350]

If increased funding was available then it would be easy to implement stewardship payments for covenant and voluntary agreements, which currently only provide compensation for establishment costs. The problem arises for the establishment of similar stewardship payments under the RMA as section 85 expressly prohibits any compensation in relation to land use controls.[351] However, arguably some sort of financial incentive is also important under the RMA, so owners do not appeal and frustrate the restrictions put in place under the Act to protect potential future habitats.

3. Compensation for regulatory control under the Resource Management Act 1991

Although there is widespread argument for a 'takings' regime in the RMA, it is also accepted that section 85 is justifiable to an extent and that a principled approach would be needed as to if, and when, compensation is payable.[352] Arguably such a principled approach can be justified for the purpose of protecting indigenous habitats.

It has long been accepted that ownership of land does not give unconstrained use of that land.[353] Although, the general Common Law presumption is against "taking" of property without compensation this presumption can be removed by an express statutory provision to

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[350] This is already taking place; the Otago Regional Council's Biodiversity Protection Programme is funded exclusively by the Council (McKeague S., (2008) personal communication, 25 August.) However, it is questionable whether an the protection of future potential habitat would meet the specific criteria in the Local Government Act 2002 to allow the LA to increase their funding, unless there is scientific evidence that the area will in the future be needed for that purpose (see Local Government Act 2002, s 101and supra note 298).

[351] Resource Management Act 1991, s 85(1).

[352] Supra note 339, p. 81.

[353] This theory dates all the way back to *William Aldred's Case* (1609) 77 Eng. Rep. Co. Rep. 818 where it was held that one may not use ones property so as to damage the property of another. From this ratio evolved the doctrine of nuisance from which the modern environmental law is said to have developed (supra note 163, p. 78).

the contrary.[354] This is justified on the basis of the Doctrine of Parliamentary Sovereignty as well as the legal and ethical theories of contractarianism and utilitarianism mentioned above.

It is well recognised that section 85 RMA removes this common law presumption of compensation in respect of land use control under the RMA.[355] This illustrates a shift in policy from the "nineteenth century preoccupation with property rights"[356] towards a more "holistic"[357] utilitarian model of regulation, one which allows the interference of private property rights in the public interest.[358] Thus section 85 illustrates that private property rights are not necessarily given priority over the public interest of environmental regulation.[359] When property owners argue for compensation for an effect on their private property interest, such as a perceived lost economic development opportunity or loss in value of the land, this is usually refused by justification that the regulation is presumably in the public interest. In these cases the courts have emphasised that there are other possibilities for aggrieved landowners: They can apply for a resource consent to allow their activity;[360] they can apply for a plan change;[361] or make a submission on a proposed plan which is publicly notified.[362] The Courts have also recognised that in practice the local authority has the discretion as a

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[354] See for example: *Attorney-General v De Keyser's Royal Hotel Ltd* [1920] AC 508 (HL); *London & North Western Railway Co v Evans* [1983] 1 Ch 16, 23; *Ashburton County v Clifford* [1969] NZLR 927 (CA); and *Faulkner v Gisborne District Council* [1995] 3 NZLR 622.

[355] *Faulkner v Gisborne District Council* [1995] 3 NZLR 622.

[356] Supra note 355, p. 630.

[357] Supra note 355, p. 630.

[358] Supra note 217.

[359] Supra note 217. See also *Faulkner v Gisborne district Council* where the Court observes that: "As has been acknowledged both academically and judicially, the statutory implementation of integrated planning and environmental regimes presents a clear policy shift towards a more public model of regulation, based on concepts of social utility and public interest. Private law notions such as contract, property rights and personal rights of action have consequently decreased in importance" (supra note 355, p. 631).

[360] So long as the activity is not a prohibited activity under the district plan (Resource Management Act 1991, s 77B(7)).

[361] Either by applying to the relevant LA (Resource Management Act 1991, Schedule 1, clause 21) or applying directly to the Environment Court (Resource Management Act 1991, s 85 (3)) if their land is no longer capable of reasonable use and places an unreasonable burden on the landowner.

[362] Resource Management Act 1991, Schedule 1, clause 6.

rating authority under the Local Government Act 2002 to grant rating relief for any controls put on land for conservation purposes.[363]

However, none of these options act as an adequate incentive to landowners to agree to protect and preserve indigenous habitat on their land. To the contrary, in most cases it allows a landowner to frustrate this objective (i.e. in appealing the decision and delaying the process). Thus adequate compensation and incentives are needed to not only keep the landowner happy but also ensure he will protect the habitat effectively.

The question becomes: why should property owners be compensated for regulation preserving and protecting biodiversity and not other land use regulation? Arguably a distinction can be drawn in relation to preserving biodiversity values where the compensation is in the form of stewardship or maintenance payments. These payments are not "compensation" in the usual understanding of the word (i.e. compensation for a perceived adverse effect on a private interest), rather they are payments to cover the cost of something done in the public good (i.e. the preservation of biodiversity). This would be in accordance with the utilitarian rationale behind section 85 and thus may provide a justifiable exception to the section. These payments are important if the restrictions are to be accepted by the landowner. A happy and "compensated" landowner will be a better custodian of the new habitat and he will also be less likely to appeal the restriction in the district plan[364] or a condition on a resource consent.[365]

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[363] See: *Leith v Auckland City Council* [1995] NZRMA 400; Local Government (Rating) Act 2002, Schedule 1, Part 1, clauses 3(b) (land used for conservation or preservation purposes is non-rateable), clause 5(b) (land used by or for the purposes of a Queen Elizabeth the Second National Trust is non-rateable); Local Government Act 2002, ss 102(4),(5), 109, Schedule 11(2)(g)(iii) (community goals relating to the protection of significant indigenous vegetation and significant habitat of indigenous fauna are objectives relevant to the determine rates relief on Maori land).

[364] Resource Management Act 1991, ss 85(2) and (3) allows a landowner to challenge a provision in a plan if it renders his land "incapable of reasonable use" and/or "places and unfair and unreasonable burden" on him.

[365] Resource Management Act, s 120.

4. Conclusion

Stewardship payments provide not only an answer to better management under voluntary agreements, both qualitatively and quantitatively, but also serve as a possible justified exemption from section 85 RMA. This would hopefully result in fewer challenges to restriction placed on private property rights in order to protect indigenous habitat.

CONCLUSION

The protection of biodiversity is one of the major problems facing New Zealand environmental law today. This will be exacerbated by the impact climate change is predicted to have on biodiversity. A likely consequence of this will be that some species' current habitat climatic conditions will change beyond their tolerance thresholds and they will need to find new areas which will accommodate their tolerance levels.

Under its international obligations New Zealand must adapt its legislative frameworks and policies in order to protect biodiversity from this impact of climate change. New Zealand environmental law does provide ample mechanisms to protect habitat through both voluntary initiatives and regulatory controls. It also has the potential to recognise the effects of climate change in decision making and thus give adequate protection to species adapting to climate change, moving from their current habitats in search of more hospitable ones. However, many hurdles need to be crossed for such protection to be adequate and upheld.

Firstly and most importantly, more research is needed to predict the movement of these species. Once this is done, the required new areas need to be identified. An integrated framework through national policy will be essential to combine the knowledge and resources to provide the best possible information on species movement and to avoid a fragmented and partial approach to identification and protection.

The identification of the areas will require decision makers to adopt a precautionary approach in light the uncertainties of the impact of climate change on biodiversity. Similarly, once the areas have been identified the precautionary approach will have to be strong enough to be upheld by the courts and thus to afford the areas with adequate protection. This is especially the case in relation to private land where landowners have the opportunity to challenge the decision to place such a restriction on their property.

The precautionary approach is currently not adequately addressed in the conservation estate legislation and the approach under the RMA has not been applied generously enough by the courts to enable decision makers to make provisions for potential future habitat protection. Again a policy at a national level will be needed under both legislative schemes to ensure potential future habitat will be taken into consideration by both DoC and LAs when making

decisions on what areas deserve protection and to enable these decisions to be upheld in the case of a challenge by an aggrieved landowner.

However, even if such a decision to place a restriction on private land is upheld, it is unlikely the aggrieved landowner will make a good custodian of the land or manage the area adequately. For this to be avoided, adequate compensation is required to keep the landowner happy. Similarly, if there is no legal restriction in place, a landowner with a required area should be provided with an incentive which is sufficient enough to induce him into a voluntary agreement.

Stewardship payments provide a solution to both of these scenarios. They would ensure voluntary agreements are entered into by more people as the protection of biodiversity would be internalised and provide an economic incentive in the form of a steady income. They would also provide sufficient funding to enable the landowner to adequately implement the protection measures. Stewardship payments could also prove to be successful under the RMA in encouraging landowners to be more accepting of restrictions placed on their private property rights for the same reasons as the voluntary agreements. Further, stewardship payments may provide a justifiable and principled exception under section 85, in that they are based on the same utilitarian reasoning as this provision.

New Zealand therefore does have the statutory framework in place to deal with the issue of species movement due to climate change. With statutory amendments to both the CA (to formally recognise the precautionary principle and climate change) and the RMA (to amend section 85) and national policies under both legislative schemes to ensure the issue is both recognised by decision makers and upheld by the courts, New Zealand may be able to prevent even more of our rich biodiversity vanishing forever.

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