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Lifting the Looking Glass: Tradable Occupation Could Facilitate Ocean Renewable Energy in New Zealand

Prepared by
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Established by the
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to facilitate public policy dialogue
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Even with all the assistance I am bound to have missed a point or made a mistake. I alone am responsible for anything of the sort.

Ian Boisvert
Wellington, August 2011

EXECUTIVE SUMMARY

Atypical of most isolated island nations New Zealand is awash in renewable energy. Among its renewable sources are wave power, tidal currents and offshore wind. Collectively called "offshore renewable energy," developers of this inchoate industry promise it will deliver an abundance of clean power. The government appears willing to believe them.

In the last year New Zealand has declared the national importance of renewable energy and addressed ocean renewable power development through the New Zealand Coastal Policy Statement, Draft New Zealand Energy Strategy, and the National Policy Statement for Renewable Energy Generation. Nevertheless, developers face two significant challenges.

First, their technology is much more expensive than proven renewable devices. OECD estimates ocean renewable generating costs will average US$281 per megawatt-hour (MWh) over the next decade while onshore wind will average US$85 per MWh over the same period. Reversing this trend falls to developers to engineer more efficient designs, and operations and maintenance procedures.

The other challenge for New Zealand offshore renewable developers is coastal space access. Multiple commercial and recreational users, as well as Māori, already occupy the marine "commons." Yet the only way developers can gain access is applying for a coastal permit through which a Regional Council allocates space. Inevitably, conflict arises because Regional Councils can displace those existing users against their wishes. Thus coastal permits tend to inflame rather than quell conflict.

This aggravates development in three ways. Because a Regional Council can displace existing users, those users will litigate to frustrate an applicant's plans. Second, Regional Councils vary both in resources and expertise to make informed decisions about governing ocean space as well as how inclined they are to recognise their region's ocean renewable energy sources. Third, the combination of these issues raises uncertainty for ocean power developers thereby making it difficult to raise project capital.

This paper proposes three practical solutions to address these challenges. First, offshore renewable energy developers, as a group, should convene a meeting with existing ocean users. The meeting should focus on how commercial ocean users might resolve conflict ahead of applying for a coastal permit. As newcomers, offshore developers have the burden of making themselves welcome in a long-standing community. Second, Regional Councils should officially inventory and support their regional offshore renewable resources, and central government should support the councils by conducting a comprehensive environmental assessment of offshore renewable power development.

Resolving coastal space conflict is the third and most critical solution because it will increase efficiency and transparency, reduce economic waste, and build a new market for public revenues. This paper proposes creating a constrained regime of Tradable Occupation Rights (TORs). TORs would allow users to allocate marine space between themselves contingent on not violating ecological thresholds still set through

coastal permits.

TORs would build on the Resource Management Act's provision for permit transferability but also expand that transferability to existing commercial and cultural ocean users (*e.g.*, commercial fishing and customary rights users). Expanding these rights would allow users to resolve space allocation across sectors rather than just within one sector as currently happens. It would thus encourage cooperation rather than conflict. TORs could build a new market that could be taxed to generate public revenue specifically to fund ocean policy and governance. In short, TORs could significantly reduce economic waste and conflict inherent in the existing coastal allocation process while remunerating the public for commercial use of the resource.

Establishing TORs will not be easy. The first step should create a national registry identifying existing users and the spaces they occupy. These should include all coastal permit holders, aquaculture farms, titled and non-titled but legally recognised uses, and commercial fishing quota owners. The national commercial fishing registry, operated by FishServe, could expand to include the TOR registry. There should be a transition phase in which, before applying for a coastal permit, new users must negotiate in good faith with users whose registered spatial interests overlap with the proposed new site. The transition phase could reduce conflict and result in an improved process negating the need for additional steps. However, if it does not, the third step should create TORs which would give registered users the ability to alienate their site to a new or registered user for up to the term the coastal permit applicant seeks. Importantly, a TOR should not convey a development right – coastal permits adequately serve that purpose.

TORs will improve the existing system, but will not solve all problems. For example, it could trigger Treaty of Waitangi claims that are already brewing. But TORs would realign incentives from conflict to cooperation. A TOR regime could also bring transparency to a process suffering from regulatory capture and arbitrariness. And rather than giving away a public good for free, TORs could generate public revenue to fund ocean governance.

In sum, the existing coastal permit process is marked by opaqueness, conflict, uncertainty, and providing public goods for free. Adopting these recommendations would help resolve these issues. But it is not the government's burden alone. As newcomers, offshore energy developers have to establish their own goodwill in a community reticent to change and outsiders. Their success depends on it.

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He waka eke noa. – Māori proverb[1]

INTRODUCTION

When Māui fished New Zealand's North Island from the ocean depths he probably did not worry about snagging his hook on a renewable energy device.[2] Today he would. In the last few years Te Ika a Māui's mouth has hosted wave energy devices[3] and its gills host wind turbines.[4] And renewable energy developers are looking to install even more devices in New Zealand's oceans.

Ocean renewable energy includes wave power, tidal currents, and offshore wind.[5] Wave power devices convert swell energy into electricity. The devices include the seafloor-mounted WaveRoller,[6] the partially submerged Wave Energy Technology-New Zealand (WET-NZ) "point absorber" device,[7] and the floating Pelamis device.[8] Tidal devices convert the tidal flows into electricity. These devices range from barrages, such as has existed in La Rance, France, since the 1960s, to turbines like the OpenHydro. Offshore wind turbines convert wind pressure into electricity. These are identical to onshore turbines with the exception of being Goliath-sized.[9] Collectively, these device developers promise they will tap large amounts of clean power. New Zealand's government appears willing to believe there is such potential.

In 2007 the government allocated NZ$8 million that the Energy Efficiency and Conservation Authority (EECA) has partially dispersed through its Marine Energy Deployment Fund.[10] While that is the extent of the financial support, government policy has become increasingly supportive of renewable energy as a whole, and ocean renewable energy to a lesser extent. Last year the government published a revised New Zealand Coastal Policy Statement (NZCPS), a document required by the Resource Management Act (RMA).[11] The NZCPS mirrors the RMA in its purpose of sustainable management of coastal resources.[12] It contains new provisions that arguably promote, but at the very least address, ocean renewable energy development.[13] The Draft New Zealand Energy Strategy (NZES) echoes the NZCPS

[1] Translated as "A canoe which we are all in with no exception." http://www.maori.cl/Proverbs.htm
[2] According to Māori legend, the trickster god Māui raised New Zealand's North Island (Te Ika a Māui) from the ocean when fishing with a jawbone hook. *The North and South islands* (n.d.), Te Ara: Encyclopedia of New Zealand.
[3] Te Ika a Maui's mouth is Wellington Harbour. "The first device was deployed in both Christchurch and Wellington for short periods over two years from 2006." Wave Energy Technology-New Zealand (n.d.), Developments.
[4] I am relating the hills west of Wellington as Te Ika a Maui's gills. Meridian Energy (n.d.), Support for Project West Wind.
[5] No standard use exists for offshore renewable energy. Some places prefer "marine renewable energy," others "ocean renewable energy," and still others "offshore renewable energy." I use the terms interchangeably because they all refer to the collective forces of wind, waves and tidal energy that occur beyond our seashores.
[6] WaveRoller (n.d.), Harnessing the Blue Energy.
[7] Wave Energy Technology-New Zealand (n.d.), Developments.
[8] Pelamis Wave Power (n.d.), The Pelamis.
[9] For example, Vestas is designing a 7 megawatt turbine. Never to be outdone, Spaniards are designing a 10-15MW offshore turbine. *Power Magazine* (1 May 2011).
[10] Energy Efficiency and Conservation Authority (n.d.), Marine Energy Deployment Fund.
[11] Department of Conservation (n.d.), *New Zealand Coastal Policy Statement* 2010.
[12] Ibid. p. 29.
[13] Ibid. Policy 6, Paragraphs 1(a) and 1(g).

in terms of ocean renewable energy, though like any echo it is distant and weaker in its support. It only promotes ocean renewable development "as appropriate."[14] Yet it also "embrace[s] . . . new energy technologies," a category in which all offshore renewable devices indisputably fall.[15] Overall, governmental support for offshore renewable energy appears to be growing.

Indeed, the government should support ocean renewable energy since, in line with its international obligations, New Zealand set an aspirational goal to generate 90% clean electricity by 2025.[16] The goal is not insurmountable.[17] New Zealand already generates over 70% of its electricity from renewable sources.[18] Hydropower dominates with generating capacity of 5,378 megawatts (MW) of New Zealand's estimated total capacity of 9,486 MW.[19] Additional growth of hydropower, however, is unlikely.[20] The next most prolific source is geothermal. New Zealand presently has a generating capacity of about 635 MW from its rich geothermal resources.[21] Wind power, though, has the largest room for growth of onshore sources. Onshore wind farm generating capacity is only 496 MW.[22] According to Professor Jonathan Leaver of Unitec's Civil Engineering Department, untapped onshore wind has the potential to offer more than three times the total electricity New Zealand generates now.[23] Emerging behind these established renewable energy generators are ocean renewable power developers.

Even with government support, ocean energy faces two significant challenges in New Zealand. First is the commercial challenge. At present, existing marine renewable generating devices cannot commercially compete with onshore renewable devices.[24] On cost alone International Energy Agency "best-policy" estimates show that ocean renewable electricity will average US$281 per megawatt-hour (MWh) over the next decade.[25] Onshore wind, on the other hand, will average US$85 per MWh over the same period. There is also competition against much more established designs with fewer operational or maintenance issues. Geothermal and hydropower plants have been around for decades whereas existing wave and tidal devices are prototypes of prototypes.[26] Deploying and maintaining ocean energy devices is much more expensive because of the harsh marine environment. This is true even in the case of offshore wind turbines, which being larger than their onshore cousins generate more

[14] Ibid.
[15] Ibid.
[16] Ibid. pp. 9, 25 and 27.
[17] In fact, New Zealand produced over 90% of its electricity from renewable sources in the 1970s.
[18] Johnson, D. L. (2008), p. 211. But only 35% of its overall current energy use is from renewable sources. The rest is fossil fuel derived. *See* Ministry of Economic Development (2010a), p. 10.
[19] Ministry of Economic Development (2010a), p. 114.
[20] Rivers with hydro-electricity dams may see marginally more damming; however, those rivers without dams are extremely unlikely to see new dams built because of political and environmental opposition. In fact, the last major hydro dam was finished in 1993. *See* Johnson, D. L. (2008), p. 206, 224 (providing a table showing the number of applications for new generators 10 megawatts or greater; only 6 out of 36 are for hydro).
[21] Ministry of Economic Development (2010a), p. 114.
[22] Ibid.
[23] Leaver, J. (14 June 2011), Professor, UNITEC. Pers. Comm.
[24] International Energy Agency (2010), p. 310.
[25] Ibid. p. 309.
[26] Ibid. p. 307; *See also* Edenhofer, O. *et al.* (2011), p. 5.

electricity per turbine and thus enjoy economies of scale.[27] Direct subsidies or feed-in tariffs could help ocean renewable developers overcome the competitiveness challenge,[28] but the National-led coalition government declared it will not assist in this way because geothermal, hydro and wind generation are economic without the support.[29] Thus the burden falls on device developers to engineer more efficient designs, determine more cost-effective installation and maintenance processes, or both.

The other significant challenge for ocean renewable energy generation is access to space. Ocean energy developers are building in a "commons."[30] Inevitably, that means conflict. From iwi harvesting kaimoana to commercial fishers chasing quarry to surfers hunting waves, the users of the marine commons are diverse and numerous. Each wants to continue his or her preferred activity preferably without having to share with a new user, or be threatened with the degradation of the environment supporting his or her activity.

At present the only way ocean renewable developers gain access to their preferred site is to seek Regional Council permission through a coastal permit for coastal use ("coastal permit").[31] There are three reasons this is a flawed mechanism for allocating space.

First, far from resolving any conflict it inflames it. Existing users will rightly see that the Regional Council's approval of a coastal permit could displace their use of the space that the developer wants to occupy. Thus they use legal processes to stall, oppose, and change the developer's plans.[32]

Commercial fishers' limited legal property right in fish stocks and iwi aspirations to govern or own parts of the foreshore and seabed add further complications. However, Regional Councils can still displace these users without requiring compensation for their impacted rights in fish and interests in the foreshore and seabed. These parties are especially motivated to use the legal process to protect their rights. In these instances the impacted users twist the environmental-effects focus of coastal permit applications from "effects to natural resources" to "effects to the natural resource that

[27] International Energy Agency (2010), p. 330 (discussing need for more robust offshore turbines). *See also* Patel, S. (2011).
[28] Ivan Lieben & Ian Boisvert (2012), Making Renewable Energy FiT: A Feed-in-Tariff Certifying Body Could Accelerate Renewable Energy Deployment in the United States, 52 Nat. Resources J, forthcoming.
[29] Then-Energy Minister Gerry Brownlee said "I want to make it very clear at this occasion that this government won't be introducing any sort of feed-in tariffs to make local generation economic," White, M. (21 February 2011).
[30] The scope of this report extends only out to 12 nautical miles, the territorial waters over which New Zealand has near-exclusive jurisdiction. The report does not cover New Zealand's immense Exclusive Economic Zone (EEZ) because offshore renewable energy is extremely unlikely to develop out there with the present technology. However, if the National-led coalition government succeeds in passing its pending bill on the EEZ it will extend the resource consent regime as practised under the RMA to the EEZ. The newly-formed Environmental Protection Authority is proposed to be the enforcing agency. Hon. Dr N. Smith(2011).
[31] Rennie, H. (2006), p. 513.
[32] Ibid. p. 515 (discussing multi-million dollar litigation between aquaculture farmers and scallop harvesters in Tasman and Golden Bays).

I, as a user, am invested in."[33]

Arguably, the ocean energy developer has little incentive to negotiate with existing users because there is not much basis for trade. While it would be wise to collaborate with existing users, without either party having secure title over the space there is a high risk such collaboration could fail. Indeed, Crest Energy experienced this exact scenario in its Kaipara Harbour project. And why go through pains to negotiate when an applicant knows that success in seeking the coastal permit means the Regional Council can displace those users anyway?

Second, even though Regional Councils allocate coastal space, they are reportedly underfunded and ill-equipped to manage ocean policy and science. They also differ in how much value they assign to renewable energy development in their RMA-required Regional Coastal Plans (RCP) and Regional Policy Statements (RPS). Environment Waikato, for example, recognises rich wave energy resources along its coastline even though it has no pending projects.[34] By contrast the Northland Regional Council does not recognise its ocean energy resources even though it is the only jurisdiction in the world, let alone New Zealand, to have permitted a commercial-scale tidal energy development.[35] Such incongruence between Regional Council approaches could send confusing and potentially wrong signals to ocean renewable developers about their openness to new projects.

Third, combining the high potential for legal conflict with disparate Regional Council approaches to ocean energy creates high uncertainty, a disincentive to development. Even if developers were risk-tolerant, they would be unlikely to raise the capital to support their projects because institutional investors are unlikely to share that risk, or they would put such a premium on it as to effectively dissuade them.

The good news is that three practical steps could reduce these challenges. First, "cheap talk" is the lowest cost alternative. Ocean renewable energy developers as a cohesive group should invite existing ocean users who have the most to lose to meet for a weekend of roundtable discussions. The focus should be to generically identify what parts of the coastline have the greatest potential for wave, tidal or wind power, and how the parties might resolve conflicts around those areas ahead of time. The goal of the meetings should be for ocean renewable developers to make themselves a welcome part of the existing ocean community. As new users, ocean renewable developers have the burden of making themselves welcome.

Second, Regional Councils should, among other things, adopt similar standards to ocean renewable energy development which the national government should undergird with an industry-wide environmental impact assessment. National policy clearly supports the development, but the central government could strengthen it by comprehensively assessing how ocean renewable devices interact with the natural environment. That assessment would help Regional Councils standardise their approach. In addition, Regional Councils could write memoranda of understanding to share technical expertise and help each other overcome limitations in oceans governance and understanding.

[33] Resource Management Act (1991), Section 17.
[34] Waikato Regional Energy Forum (2009), p. 28, 106-109.
[35] Northland Regional Council (29 October 2010).

The third and most critical solution is for the government to create Tradable Occupation Rights (TOR) within New Zealand's coastal marine area. TORs would create constrained but tradable rights for commercial coastal users to allocate coastal space between themselves contingent on their use not violating ecological thresholds set broadly by the comprehensive environmental assessment and individually through coastal permits.

The bases for TORs already exist in New Zealand. The RMA allows coastal permit holders to transfer occupation of their sites.[36] Ocean property rights already exist with commercial fishing property rights in fish stocks,[37] and the Marine and Coastal Area Act (MCAA) allows Māori to apply for use rights.[38] The problem is that there is no mechanism for coastal permit holders, commercial fish harvesters, aquaculturists, and Māori to trade occupation across their respective sectors. TORs would be that mechanism thus encouraging cooperation rather than conflict. TORs would also build a new market that could generate revenue to fund ocean policy and governance. And new market opportunities could lead to viable ventures between ocean renewable developers and existing users, as seen in geothermal development. TORs could significantly reduce the economic waste endemic to the coastal permit process.

Importantly, coastal permits would continue to regulate development thus ensuring no undue environmental effects will occur. However, with TORs the coastal permit process would be streamlined because applicants would already have secured occupation rights from existing users. In short, TORs would create equitable, transparent means to efficiently allocate ocean space while upholding ecological integrity.

Establishing TORs will not be easy. There are questions of allocation, scope of the tradable right, navigation, public access, and so on. Shying away from these questions avoids the conflict, but does not resolve it. This paper addresses these questions after laying out the case in support of the proposed solutions.

Section one explains my methodologies and assumptions. Section two outlines the legal bases for siting ocean renewable energy projects. Section three analyses the advantages and disadvantages of New Zealand's coastal permit process for ocean renewable development. Section four, the heart of the paper, proposes a new regime that would allow renewable energy developers to trade occupation directly with existing occupants while respecting ecological thresholds and generating new sources of public revenue. Finally, section five discusses barriers to implementation.

[36] Resource Management Act (1991), Section 135.
[37] *See generally* Fisheries Act 1996, Part 4.
[38] Marine and Coastal Area (Takutai Moana) Act (2011), Part 3. *See also* Yandle, T. (2007) (giving an overview of differing bundles of property rights in New Zealand's coastal setting).

1 METHODOLOGIES AND ASSUMPTIONS

My research focuses on how to allow new renewable energy developers to enter the Coastal Marine Area (CMA) while minimising conflict, inefficiencies and inequity, but generating finances for the government. Thus I wade into legislation over the foreshore and seabed. I am aware of the passions surrounding the foreshore and seabed debate, so as a foreigner I propose policy changes affecting governance from a humble and respectful position. However, the purpose underlying these policy changes is bold: help ocean stakeholders expediently resolve spatial occupation issues by reducing incentives to litigate. From all my interviews this emerged as the leading issue.

Other complexities such as the remarkable ecology of New Zealand's oceans, a robust commercial fishing industry, a growing aquaculture industry, and the public's desire to retain unfettered access to the beach and foreshore also informed my approach. Intertwined with all this are cultural, historical and political contexts that in seven months I would be foolish to think I could fully grasp. I endeavoured to learn as much as I could.

I interviewed as many people (50 total) from as many relevant groups as possible. I started out talking to vacationing Kiwis about their perspectives on the foreshore and seabed and their relationship to the ocean. I then interviewed professionals and academics. The professionals ranged from commercial fishery consultants to energy CEOs to resource management lawyers. Academics included engineers, economists, and natural resource experts. Next, I interviewed government officials at regional and national levels. That gave me insight into what policy changes might be likely and needed. Finally, I interviewed Māori leaders. That gave me insight into how Māori might view proposed policy changes. In short, I did my best to develop as full a picture as possible about what New Zealand as a whole thinks about the existing coastal regulatory framework and what impact proposed policy changes might have.

I simultaneously conducted an extensive literature review starting with articles and books New Zealanders wrote about renewable energy, the foreshore and seabed, and oceans governance. I then branched out to international work on governance of the commons and oceans. The combination of the national and international literature review crystallised the direction I take in this paper.

From this research I set out to ensure that any policy proposals I create are rooted in New Zealand practice, or at least would not be foreign to its legal structure. In that sense TORs build on existing ocean property rights that New Zealand successfully uses already. If anything TORs merely reflect what already happens in coastal permit applications. Namely, a coastal permit grants a host of property rights to the holder (which the RMA maintains is not personal property).[39] In short, a TOR regime would legally recognise tradability for one of these rights – occupation – and give all commercial ocean users the means and incentives to determine occupation issues among themselves. As a right, occupation differs from use because it only allows the occupier to exist in the space but not develop or otherwise alter the space.

[39] Makgill, R. and Rennie, H. (2011).

There are also assumptions underlying what I propose. These assumptions derive from my interviews and literature review. The most important assumption is that TORs could work with other ocean management tools. For example, policymakers could use TORs within marine spatial planning, a science-based tool that aims to balance human use with ecological values in the ocean.[40] In that sense a tool like TORs provides an excellent incentive to cooperate, to recognise the value of the underlying ecology, to maintain the value of that ecology, and to build individual gains that raise society as a whole. However, TORs will not necessarily value *all* ecology, protect fugitive species, nor account for downstream effects outside of another user's TOR-held space. Policymakers could use TORs with other tools that recognise those values.

The next assumption is that New Zealand's legal institutions are robust and sophisticated. From my readings, interviews, and observations I am confident that New Zealand's respect for the rule of law, its judiciary, its markets, and its overall governance is more than capable of embracing a tradable occupation scheme in the oceans. Indeed, it already has a similar market for commercial fishing that enjoys world renown.

A final assumption is coastal use will increase and consequently so will the potential for conflict. Raewyn Paert, a New Zealand ocean advocate, said to me that market allocation systems "only work after the resource is over allocated."[41] In my opinion that is precisely backwards and wrong. Timing is an issue and there will be periods where a market system is unnecessary because of insufficient competition. However, waiting until "over allocation" means waiting until resource use has already exceeded unsustainable levels. I see and foresee growing competition over coastal resources in New Zealand. What neither I nor anyone else can see is when those resources will be "over allocated." Renewable energy generation represents one new industrial coastal use. More will come. Why wait for the tragedy of overuse before recognising the value of New Zealand's precious coastal marine area?

I see my role writing this paper as an architect, not a builder. I am not writing legislation or detailed policy statements. But hopefully I offer a blueprint that gives New Zealand policy makers a solid idea on which to build solutions to encourage ocean renewable energy development and untangle coastal space conflict.

[40] Intergovernmental Oceanographic Commission (2009), p. 18.
[41] Paert, R. (28 April 2011). Senior Policy Analyst, Environmental Defence Society. Pers. comm.

2 COASTAL MARINE AREA LAW

New Zealand's ocean energy developers are fortunate in one sense. The country's legal framework for siting ocean renewable devices is straightforward when compared to the United States (US). A US developer has to sift over 140 pieces of federal legislation, possibly deal with three federal permitting agencies – not including federal agencies that have consultation requirements – state legislation and agencies, municipal agencies and legislation, and, where applicable, tribal agencies.[42] Assuming a US developer ever obtains a 5-year pilot-project permit, the developer is still stuck. To secure a full-term permit from one federal agency the developer has to apply five years in advance.[43] Perversely, before a developer even tests its pilot project he would have to seek a full-term project permit.

Where the US legal framework is like playing simultaneous games of chess on multi-dimensional boards, New Zealand's is more akin to a traditional chessboard where the RMA is the queen of the framework. Coastal permits, however, are the king since acquiring them is the ultimate goal. But the RMA makes it difficult for ocean developers to do so because a coastal permit is both permission to develop and a governmental allocation of public space, a tetchy issue. The RMA continues to magnify Regional Councils' power out to 12 nautical miles by also requiring them to plan coastal use through Regional Coastal Plans (RCPs). Thus for ocean renewable energy developers, effectively handling the RMA matters most of all.

Other legislation is also important. None more so than the recently enacted Marine and Coastal Area (Takutai Moana) Act (MCAA). The MCAA establishes processes through which Māori can apply for customary ocean rights and to create independent coastal management plans.[44] Other coastal legislation like the Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act establishes New Zealand's jurisdictional limits over its oceans.[45] The Marine Reserves Act gives the Department of Conservation the ability to establish "no-take" marine reserves.[46] The Fisheries Act establishes law for commercial fishing.[47] The Aquaculture Reform (Repeals and Transitional Provisions) Act works in unison with the RMA and Fisheries Act to regulate aquaculture.[48] And there still is yet more legislation specific to fishing and aquaculture.

So while New Zealand's legal framework for siting ocean renewable devices is like playing on a traditional chessboard, its rules more closely resemble those from *Through the Looking Glass.*

Resource Management Act

When Alice went through the looking glass she found a backwards world. The same holds true when a renewable energy developer goes from land to territorial waters. Unlike on land, the RMA presumes that development within the Coastal Marine Area

[42] Stoel Rives LLP (2011), Ch.3-1 – Ch.3-22.
[43] Ibid. Ch.3-4 – Ch.3-5.
[44] Marine and Coastal Area (Takutai Moana) Act (2011), Part 3, Subpart and Sections 85-87.
[45] Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act (1977), Part 1.
[46] Marine Reserves Act (1971), Section 3.
[47] Fisheries Act (1996).
[48] Aquaculture Reform (Repeals and Transitional Provisions) Act 2004.

(CMA) – mean high water springs out to 12 nautical miles[49] – is prohibited unless explicitly permitted.[50] The negative presumption reflects that the CMA is a Crown-managed "commons".[51] And the RMA is the Red Queen that oversees that commons. Like the Red Queen it is full of paradox, inconsistencies, and inefficiencies, and these apply especially for coastal development.

The RMA's sole purpose is to sustainably manage all natural and physical resources.[52] "Sustainable management" is an all-encompassing balance to allow for present and future human use while protecting the "life-supporting capacity" of resources by limiting adverse environmental effects.[53] In short, it sets an effects-based test for human use: only if an applicant can demonstrate its project will avoid, remedy, or mitigate potentially adverse environmental effects does the applicant stand a chance of succeeding.[54]

The RMA does, however, allow development within the CMA. For example, to deploy a wave, wind or tidal device a developer needs to apply for a coastal permit. The developer's application faces two hurdles. First is the effects-based test. Second, because the application is a *de facto* request for spatial allocation in the CMA, it must withstand challenges from existing users.

The national government appears to understand the inefficiencies and conflict inherent in using the RMA in this way. In the last couple years it amended procedures within the RMA, and has or is in the process of revising national policies that flow from the RMA.

Resource Management Act's Policies

Like the Red Queen, the RMA sets the law but subordinate national policies and regional plans deliver it. Relevant national policies for ocean renewable energy include the NZCPS and the Draft NZES. Just this year central government enacted a rare National Policy Statement (NPS) for renewable electricity generation. All twelve Regional Councils have Regional Policy Statements and Regional Coastal Plans.

New Zealand Coastal Policy Statement

The only mandatory national policy statement under the RMA is the NZCPS.[55] It provides national policies that further the RMA's purpose in the CMA.[56] Authorities considering coastal permit applications must have regard to relevant NZCPS policies.[57] The NZCPS recognises the increasing demand for coastal space owing to

[49] Ibid. Section 2, Paragraph 1(defining "coastal marine area").
[50] Ibid. Sections 12, 14, and 15-15C.
[51] Rennie, H. (2006), p. 513.
[52] Resource Management Act (1991), Section 5, Paragraph 1 ("The Purpose of this Act is to promote the sustainable management of natural and physical resources.").
[53] The RMA defines "environment" so broadly that it arguably lacks any meaning. Ibid. Section 2(1) (defining "environment"). Ibid. Section 5, Paragraph 2
[54] Ibid. Section 2, Paragraph 1(defining "applicant").
[55] Gregory, D. (2008), p. 144.
[56] New Zealand Department of Conservation (n.d.), p. 5.
[57] Resource Management Act (1991), Section 104, Paragraph 1(b)(v); *see also* New Zealand Department of Conservation (n.d.), p. 7.

activities such as energy generation, aquaculture, and sand mining.[58] Additionally, the NZCPS explicitly values enabling ocean renewable energy because ocean resources are of significant value.[59] Along these lines it considers ocean power generation and transmission infrastructure as important for social, economic and cultural well-being.[60] Bolstering that are policies emphasising the potential value of ocean renewable energy to meet future demand.[61]

But the NZCPS fails to offer any meaningful way to resolve coastal space conflict, which it paradoxically encourages through supporting new uses. If anything, it stirs conflict by promoting "the efficient use of ***occupied*** space."[62] Why, if coastal space were occupied, would the current occupant see any other use as more efficient?

The NZCPS also establishes the national significance of surf breaks in seven regions.[63] The full extent of what this means is yet to be determined, but wave energy developers are wise to consider that "surf breaks" include the "swell corridor," a massive window.[64]

In short, the NZCPS recognises and apparently promotes the potential value of ocean renewable energy generation. But it simultaneously sows coastal space conflict even as it promotes increased demand. It thus leaves room for material recommendations on how New Zealand might efficiently and equitably resolve coastal space conflict.

Draft New Zealand Energy Strategy

Last year the national government released a draft New Zealand Energy Strategy (Draft NZES). Currently, the government is working on material changes to the NZES, but as of the printing of this report the changes have not been released; therefore, the version I review is from July 2010. Moreover, the Draft NZES is not derived from the RMA, but I put it in this section because it is a national government policy that advocates marine power development.

In describing the future, the Draft NZES discusses how marine resources could create a more robust power generation system.[65] On its first priority, developing resources, two of the three ways the government promotes achieving that is by developing renewable energy resources and embracing new energy technologies.[66] Undoubtedly, ocean renewable energy sources and the emerging technologies to harness those fit within these categories. Indeed, the Draft NZES says that the government should continue funding marine energy deployment.[67]

The document also says that resource consents and planning processes will be

[58] New Zealand Department of Conservation (n.d.), p. 5.
[59] Ibid. p. 10.
[60] Ibid. Policy 6(1)(a), p. 13.
[61] Ibid. Policy 6(1)(g) and 6(2)(a), p. 14.
[62] Ibid. Policy 6(e), p. 14 (emphasis added).
[63] Ibid. Schedule 1.
[64] Ibid. Glossary.
[65] Ministry of Economic Development (2010), *Draft New Zealand Energy Strategy*, p. 4.
[66] Ibid., p. 8-11.
[67] Ibid. p. 9.

streamlined to reduce cost and delays.[68] However, it does not explain in any detail how that will happen.

National Policy Statement

An NPS states objectives and policies on nationally significant matters relevant to achieving the RMA's purpose.[69] The RMA makes local authorities responsible for amending their policy statements and plans to follow an NPS, whether proposed or in effect.[70]

On April 2011, the Ministry for the Environment gazetted a National Policy Statement for Renewable Electricity Generation (NPS REG).[71] It requires Regional Councils to incorporate objectives, policies, and methods that provide for the development, operation, maintenance, and upgrading of tidal, wave, and ocean current energy sources *to the extent applicable*.[72] The italicised phrase provides a potential escape clause for Regional Councils to determine these energy sources are not applicable in their region. The NPS REG gives no further guidance for Regional Councils to make that determination nor for interested parties to know on what basis the councils must make the determination. Any updates must happen within two years.[73]

Regional Coastal Plans

The RMA creates the planning framework, but Regional Councils implement it. Local policies relevant to ocean renewable energy are the RPS and the RCP.

The RPS has the daunting purpose of enacting the RMA, describing regional resource management issues, and providing the policies and methods for an integrated management of the whole region's natural and physical resources.[74]

RCPs have the no less daunting purpose of guiding Regional Councils and the Minister of Conservation in achieving the RMA's purpose as it relates to the CMA.[75] Indeed, the coupling of national and regional oversight affords RCPs a unique position among the RMA's constituent policies. Being the only legally required regional plan is another unique feature.[76] And holding Regional Councils' plans subject to the Minister of Conservation's approval is a third unique feature.[77] The impact of that oversight cannot be overstated: it empowers the Minister of Conservation to disregard Environment Court precedent so long as the Minister follows certain procedures.[78]

In yet another *Looking Glass* twist, where the RMA *ab initio* limits coastal

[68] Ibid. p. 16.
[69] Resource Management Act (1991), Section 45.
[70] Ibid. Section 55.
[71] Ministry for the Environment (2011).
[72] Ibid. p. 6.
[73] Ibid. p. 7.
[74] Resource Management Act (1991), Section 59.
[75] Ibid. Section 63(2).
[76] Ibid. Section 64.
[77] Ibid.
[78] Gregory, D. (2008), p. 146.

development, RCPs can loosen that by allowing activities so long as they do not have adverse environmental effects, or if they do, they follow conditions to avoid, remedy, or mitigate the effects.[79] RCPs are also mechanisms for planning use in the CMA. Not all Regional Councils take full advantage of RCPs in this context, but some do. For example, the Northland Regional Council has created a "Use and Values" map that describes where certain uses are allowed or prohibited.[80] To date the Northland Regional Council uses CMA zoning largely as a way to delineate space where activities cannot take place.[81] While that may serve conservation efforts, the further constraint on space will only increase scarcity for other uses.

Unfortunately, that scarcity is not valued appropriately. Even though regional Councils can charge consent holders to use the CMA,[82] they rarely do so.[83] The Minister for the Environment said this is because politicians fear the reaction of "a roomful of yachties'" in opposition.[84] That seems like a feeble reason to allow free riding on a public good. Failing to charge for occupying public commons is one example of why, notwithstanding incredible power over coastal use, Regional Councils are not efficiently managing the area.

Coastal Permit

If the RMA is the Red Queen, a coastal permit is the Red King. And like the Red King it is best to quietly rather than boisterously go about getting it.

Authorizing Activities, Allocating Space

Of all types of resource consents, coastal permits apply to ocean renewable power projects.[85] Regional Councils, or other consent authorities,[86] must test whether the applied-for activity will or is likely to cause more than minor effects on the environment.[87] If the activity will exceed the more-than-minor test or the activity is for a restricted coastal activity the Regional Council must notify the public of the application unless certain conditions apply.[88] But not all coastal permits need to be publicly notified.[89] If the application is publicly notified, any person (broadly defined) has the right to make a submission on the application.[90] Whether an application is publicly notified or not will drastically change how involved and possibly contentious the submissions, hearing and appeals process will be.[91]

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[79] Ibid. p. 147.
[80] Lee, B. *et al.* (26 April 2011), Northland Regional Council. Pers. Comm.
[81] Ibid.
[82] Resource Management Act (1991), Section 64A.
[83] Lee, B. et al. (26 April 2011), Northland Regional Council. Pers. Comm.
[84] Hon. Dr N. Smith, N. (2011).
[85] Resource Management Act (1991), Section 87, Paragraph C.
[86] While Regional Councils are the primary consent authority, the Environmental Protection Authority may have jurisdiction over certain coastal permit applications. Resource Management Act (1991), Section 117, Paragraph 1. *See also* discussion *infra* on the 'Call-in Process.'
[87] *See e.g.,* Resource Management Act (1991), Section 95D.
[88] Ibid. Section 95A, Paragraph 2, and Section 117, Paragraph 5.
[89] Ibid. Section 95A.
[90] Ibid. Section 96.
[91] For example, Power Projects Limited secured a non-notified consent in Taranaki within the space of a few months for a pilot wave energy project. Taranaki Regional Council (n.d.). In comparison, Crest Energy battled for over six years to secure their publicly notified consent. An obvious crucial

After the submission process the consent authority weighs its decision based on a mix of prescribed factors (*e.g.,* national environmental standards, NZCPS, and regional policy statements)[92] and open-ended discretion of what is relevant and reasonably necessary.[93] Following the consent authority's decision, during which time it can impose conditions on the activity,[94] the applicant, the submitting parties, or both can lodge an appeal against the decision.[95]

In one of its more striking paradoxes the RMA maintains that coastal permits do not convey a real or personal property.[96] However, coastal permits convey a set of property rights. They give the holder the following sticks of the property rights bundle: right to develop, right to access, right to remove, and right to exclude.[97] The RMA also explicitly allows for coastal permits to pass as "personal property" on the death or bankruptcy of the holder.[98] Moreover, a coastal permit holder may even charge a fee as though it were "personal property."[99]

In comparison with land-based resource consents, coastal permits allocate space as well as permit the activity.[100] They also give Regional Councils extraordinary power and discretion over which applicants can occupy the public space without necessarily having to pay for the occupation.

Transferability of Coastal Permits

The RMA allows coastal permit holders to transfer their interest in a coastal permit to another holder, but the transfer is only good for the original site.[101] So long as the transferee stays within the boundaries of the original coastal permit it will not have to seek a new occupation consent.[102] However, if the transferee's proposed use of the site differs from how the transferor used the site then the transferee has to seek new coastal permits for its proposed development.[103]

Call-in Process

A recent RMA amendment, the call-in process, centralises decision-making for coastal permit applications, changes, or renewals. It purportedly simplifies and streamlines[104] the process if a proposed project is "nationally significant", which,

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difference is that Power Projects Limited sought consent to test only one device on a temporary basis whereas Crest Energy wanted consent for a commercial-scale array of 200 devices for 35 years.

[92] Resource Management Act (1991), Section 104, Paragraph 1(b).

[93] Ibid. Section 104, Paragraph 1(c).

[94] Ibid. Section 108.

[95] Ibid. Sections 120-121.

[96] Ibid. Section 122, Paragraph 1.

[97] The 'Coastal Marine Area as "Commons"' section of this report *infra* further discusses this point.

[98] Resource Management Act (1991), Section 122, Paragraph 2(a)-(b).

[99] Ibid. Section 122, Paragraph 2(c).

[100] Ibid. Section 122, Paragraphs 5-6 (limiting coastal permit holders' authority over the occupied coastal space and ability to treat coastal resources as licences or profit a prendres).

[101] Ibid. Section 135.

[102] Ibid.

[103] Brown, D. and S. Fleming (25 May 2011), Senior Policy Analyst, Marine and Environmental Governance, and Policy Analyst, Marine and Environmental Governance, Ministry for the Environment. Pers. Comm.

[104] Resource Management Act (1991), Section 140 legislative history language ("Section 140: substituted, on 1 October 2009, by section 100 of the Resource Management (Simplifying and

significantly, is undefined.[105] Rather than establishing a legal test to guide decision-makers, the RMA allows Ministers to consider "any relevant factor" to determine if a proposed project is nationally significant.[106] Such factors include whether the project is likely to result in significant use of natural and physical resources, could affect or bear on New Zealand's international obligations to the global environment, or will or could involve technology, processes or methods new to New Zealand which may affect the environment.[107]

Ocean renewable power production is likely to be "nationally significant." First, by generating clean power it is relevant to New Zealand's Kyoto Protocol obligations.[108] Second, it is an electricity technology and generating method new to New Zealand and may affect its marine environment.[109] If an ocean renewable energy project developer can demonstrate its project is nationally significant, the applicant can bypass the "normal procedures" of a regional hearing and approval process and have a centralised decision made through the call-in process. [110]

There are three ways an applicant may have his or her project called-in. First, if the applicant lodges the coastal permit application with a local authority, either the Minister of Conservation[111] can exercise his or her own initiative or the applicant can petition the appropriate Minister to call-in the application.[112] Either way, after the Minister has the application he or she may directly refer the application to a Board of Inquiry or the Environment Court.[113] Second, even if the Minister does not refer an application to the board of inquiry or Environment Court, the Minister may still intervene by appointing a project coordinator whose role is to advise the local authority on anything related to the application.[114] Third, an applicant may directly lodge his or her coastal permit application with the Environmental Protection Authority (EPA).[115] The EPA then sends the application over to the Minister who decides to refer the application to a Board of Inquiry or the Environment Court.[116]

In all, the call-in process resembles the Red Queen's exclamation, "If you want to get somewhere else, you must run at least twice as fast as that!"[117] That pace left Alice hot and thirsty, but no closer to her goal.

Streamlining) Amendment Act 2009 (2009 No. 31).")

[105] Part 6AA uses "nationally significant" extensively. However, it does not define it. Ibid. Section 141, ("Interpretation").

[106] There are ten categories of "relevant factors", but the RMA does not *per se* require the Minister to consider these categories. Resource Management Act (1991), Section 142, Paragraph 3.

[107] Ibid. Section 142, Paragraph 3(b), (d), and (f).

[108] Ibid. Section 142, Paragraph 3(d).

[109] Ibid. Section 142, Paragraph 3(f).

[110] Ibid. Section 142, Paragraph 3.

[111] Ibid. Section 148 provides that the Minister of Conservation is the appropriate arbiter for a project destined for the CMA.

[112] Ibid. Section 142, Paragraph 1.

[113] Ibid. Section 142, Paragraph 2.

[114] Ibid. Section 140, Paragraph 5.

[115] Ibid. Section 145.

[116] Ibid. Sections 146-147.

[117] Carroll, Lewis. (1872).

Governing Coastal Occupation

The RMA also grants Regional Councils the authority to put conditions not just specific on coastal permit applications but occupation of the CMA generally.[118] The purpose is to allow Regional Councils to manage competition for coastal space.[119] These powers include prescribing when coastal permits may be lodged, deciding as a matter of policy whether the Regional Council will simultaneously entertain coastal permit applications for the same or adjacent sites, and offering outright spatial authorisations for CMA users.[120]

Other Coastal Legislation

Although the RMA dominates what and how coastal development occurs, New Zealand has other important legislation over its territorial waters. In fact, New Zealand has experienced a recent surge in new and amended coastal legislation. Arguably, the single force driving the surge is increasing demand for and hence scarcity of coastal space.[121]

As coastal space grows scarce its value increases. However, with coastal permits as the primary means for coastal space allocation, CMA users resort to the highly inefficient tactic of lobbying for new legislation to protect or enlarge their space within the CMA. How else to explain new aquaculture amendments and efforts to repeal the Foreshore and Seabed Act (or the passage of the MCAA itself)? Even New Zealand's marine energy association, AWATEA, argues for an entirely new allocation regime specific to its industry.[122]

These lobbying efforts, although inefficient, are rational when one considers the only other means for acquiring coastal space is through a different sort of inefficient allocation, the coastal permit. And typically if legislation is passed, it is not easily repealed. That will also hold true to the extent the legislation sets aside coastal space for a specific use. Well-funded, politically-connected special interest groups are canny to advocate for legislation protecting that group's coastal use. Thus has the body of New Zealand's coastal legislation grown.

Marine and Coastal Area Act (Takutai Moana) 2011

The MCAA is the newest chapter in the Māori effort to secure legal recognition of what they perceive as their sovereign right over the foreshore and seabed.[123] Enacted this year, the MCAA repeals the Foreshore and Seabed Act.[124] Its purpose is two-fold: to protect all New Zealanders' interests in the coastal and marine environment; and,

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[118] Resource Management Act (1991), Sections 165D, 165F.
[119] Resource Management Act (1991), Section 165D, Paragraph 2.
[120] Ibid. Sections 165D, Paragraph 2, and 165F.
[121] *See* Boast, R. (2008), p. 11.
[122] Power Projects Limited (2009), p. 62-67.
[123] The full history of this legal saga is beyond the scope of this report. For an historical, legal, and political understanding I refer the reader to Charters, C. and Erueti, A. (2008).
[124] Marine and Coastal Area (Takutai Moana) Act (2011), Section 4, Paragraph 2(a); and Section 14. The repeal is largely nominal because, according to my own review and that of New Zealand experts on the subject, the MCAA only slightly expands the legal process for and scope of customary marine title rights that the Foreshore and Seabed Act recognised. *See* Makgill, R. and Rennie, H. (2011).

acknowledge the Treaty of Waitangi by recognising the inherited right or authority of coastal Māori by providing a way for them to exercise customary rights.[125] The MCAA aims to achieve these purposes through three mechanisms.

First, it divests and denies any ownership, to include the Crown's, in the common marine and coastal area.[126] Removing ownership accords a "special status" to the common marine and coastal area presumably to protect all New Zealanders' interests.[127] Yet the MCAA lays out numerous exceptions to the rule against ownership.[128] For example, the Crown still retains ownership over *inter alia* conservation sites, precious metals, fossil fuels, and abandoned structures.[129] More importantly, the balance of the MCAA arguably creates a framework for limited property rights (admittedly distinct from a fee simple title) for iwi and hapu in the common marine and coastal area.

On that, the second mechanism is the legal procedure that iwi or hapū can pursue for protected customary rights or customary marine title within six years from the passage of MCAA.[130] Applicants can use one of two procedural routes. The applicant can engage with the appropriate Minister to establish that the applicant meets certain criteria.[131] If the Minister agrees, the Order-in-Council approves the application.[132] Or the applicant can apply to the High Court.[133]

The legal tests for protected customary right and customary marine title are similar. To prove protected customary rights the applicant group must demonstrate it has exercised that right since 1840, that it continues to exercise that right in some related form, and that the right is currently legal.[134] And for customary marine title the applicant must show that it "holds" a specific coastal space in accordance with its customary rights and values, and that it has exclusively used and occupied that space without substantial interruption from 1840 to present.[135] Some regard this an onerous test.

The third mechanism is the exercise of a protected customary right or customary marine title. Protected customary rights afford the rights-holder a few privileges. For example, the rights-holder may transfer the right, commercially gain from exercising it, and curtail its own use of the right.[136] More numerous, however, are the restrictions. Restrictions include fishing limitations, controls the Minister of Conservation decides to impose, accepting that consented activities may continue or newly start in areas that overlap with where the right takes place, and that the right

[125] Marine and Coastal Area (Takutai Moana) Act (2011), Section 4, Paragraph 1.
[126] Ibid. Section 11, Paragraph 2. *See* Makgill, R. and Rennie, H. (2011) (explaining that the MCAA's definition of "common marine and coastal area" differs from the RMA's "coastal management area" in denying any ownership over water itself).
[127] Marine and Coastal Area (Takutai Moana) Act (2011), Section 11.
[128] Ibid. Part 2, Subpart 1.
[129] Ibid. Sections 12, 17 and 20.
[130] Ibid. Part 4. Section 93, Paragraph 2, and Section 98, Paragraph 1 set the six year deadline.
[131] Ibid. Sections 93-95.
[132] Ibid. Section 94.
[133] Ibid. 96-97.
[134] Ibid. Section 53.
[135] Ibid. Section 60.
[136] Ibid. Section 54.

conveys no legal interest in the space over which the right takes place.[137]

Customary marine title confers the following rights: (1) a conditional veto over Resource Consent applications where the applied-for activity would overlap with a customary marine title area;[138] (2) a conditional veto over coastal conservation efforts that the Minister of Conservation proposes;[139] (3) a conditional ability to designate and protect wahi tapu, (traditionally, spiritually, religiously, ritually, or mythologically sacred places);[140] (4) rights related to marine mammal watching permits and becoming involved in the drafting of the NZCPS;[141] (5) ownership over discovered taonga tūturu;[142] (6) limited ownership over certain minerals;[143] and, (7) the ability to create a customary marine title right planning document.[144] In short, the customary marine title offers constrained property rights such as exclusion, management, and ownership.

The MCAA is new legislation, but it largely mirrors the Foreshore and Seabed Act which it repealed. If it does anything, it creates uncertain, fractured property rights and weak title while paradoxically claiming that no party can own the common marine and coastal area. That the MCAA will resolve or even ameliorate coastal space conflict is doubtful.[145]

Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977

The Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act establishes New Zealand's sovereignty over its adjoining oceans. Relevant to this paper, the Act establishes New Zealand's territorial sea as from roughly the low-water mark out to twelve nautical miles.[146] It also establishes that New Zealand may regulate the production of power derived from water, currents, and winds in the territorial sea.[147]

Marine Reserves Act 1971

The Marine Reserves Act constrains usable space within the CMA. It allows the Department of Conservation to establish marine zones.[148] No activity greater than scientific study can happen within the zones.[149] Setting aside ocean habitat with unique biodiversity or significant ecological values is important. The Marine Reserves Act uses factors such as "distinctive," "typical" and "beautiful" to assess these

[137] Ibid. Sections 53, Paragraph 2; Section 56; Section 57; and, Section 58.
[138] Ibid. Section 64, Paragraph 1(a); and, Sections 65-69.
[139] Ibid. Section 64, Paragraph 1(b); and, Sections 70-74.
[140] Ibid. Section 64, Paragraph 1(c); and, Sections 77-80. *See* Historic Places Act (1993), Section 2 (defining "wahi tapu").
[141] Marine and Coastal Area (Takutai Moana) Act (2011), Section 64, Paragraph 1(d); and, Sections 75-76.
[142] Ibid. Section 64, Paragraph 1(e); and, Section 81.
[143] Ibid. Section 64, Paragraph 1(f); and, Section 82; *But see* Crown Minerals Act (1991), Section 10 and Ngai Tahu (Pounamu Vesting) Act 1997, Section 3 (describing the ownership limitations).
[144] Marine and Coastal Area (Takutai Moana) Act (2011), Section 64, Paragraph 1(g); and Sections 84-91.
[145] *See* further discussion *infra* under 'Marine And Coastal Area Act Constrains Ocean Development'.
[146] Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act (1977), Part 1.
[147] Ibid. Section 8, Paragraph d.
[148] Marine Reserves Act (1971), Section 5.
[149] Ibid. Section 3.

values.[150] How "beautiful" is relevant to creating scientific study zones is difficult to understand. Fortunately, the Department of Conservation is thinking about how it could create mixed-use marine reserves that would allow more than scientific study.[151] Until that time, as marine reserves increase so will competition over the remaining space.

Fisheries Act 1996

The Fisheries Act governs commercial fishing and to an extent aquaculture. It too can constrain coastal activities. Sometimes it imposes these constraints directly. For example, it allows for the creation of mataitai fishing reserves,[152] wherein commercial activity can be prohibited.[153] The Fisheries Act can also unintentionally constrain coastal activities. For example, it creates individual transferable quota (ITQ) which gives the owner of the quota a secure, tradable property right in a certain amount of a commercial fish stock, but not in the specific space of ocean that quota owner or his or her agent typically uses.[154] The ITQ owners thus have a distinct incentive to protect the space in which they exercises their ITQ or the environment they perceive as critical for the target fishery (*e.g.,* hatchery grounds). The Fisheries Act is yet more legislation that protects a particular user group's activities and access.

Aquaculture Reform (Repeals and Transitional Provisions) Act 2004

The Aquaculture Reform Act is probably the most emblematic in terms of a single group's effort to lock away swathes of coastal space. The Act, in conjunction with the RMA, provides for creating Aquaculture Management Areas.[155] Again, Regional Councils are vested with the power of creating these areas which must be "principally for aquaculture activities."[156] However, Regional Councils can approve activities to take place in these areas.[157] In practice, though, creating these areas has proven difficult since no Regional Councils have created any in the last decade.[158] Whatever the reason, giving Regional Councils the power to lock up areas for one single use is neither equitable nor efficient. Even Regional Councils recognise they do not have the expertise for this.[159]

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[150] Ibid. Section 3, Paragraph 1.
[151] Danica Stent (18 April 2011), Policy Analyst, Department of Conservation. Pers. Comm.
[152] Fisheries Act (1996), Section 186.
[153] Ibid. Section 186, Paragraphs 2-3.
[154] Ibid. Section 2 (defining "individual transferable quota"); and Sections 44, 47 and, Section 49 (governing allocation and use of individual transferable quota).
[155] Aquaculture Reform (Repeals and Transitional Provisions) Act (2004), Sections 44, 45. Importantly, the RMA also provides for ways to create aquaculture management areas. Resource Management Act (1991), Section 165AB. *See also* Power Projects Limited (2009), p. 27-30 (describing the history of aquaculture allocation and some of the implications for ocean renewable energy development).
[156] Aquaculture Reform (Repeals and Transitional Provisions) Act (2004), Section 165C, Paragraph 2.
[157] Resource Management Act (1991), Section 165F.
[158] Power Projects Limited (2009), p. 29.
[159] Lee, B. et al. (26 April 2011), Northland Regional Council. Pers. Comm.

3 ANALYSIS OF NEW ZEALAND OCEAN ENERGY SITING LAW

New Zealand's legal framework for siting ocean renewable energy devices does have its advantages such as having a single government that can standardise policy down to the local level. Unfortunately, the disadvantages outweigh these advantages.

Advantages

New Zealand's legal framework for siting ocean renewable devices enjoys at least two advantages. First, overarching national policy can direct Regional Councils in how to address ocean renewable development. Second, ocean renewable developers deal with a relatively streamlined permitting process as compared to the United States.

Attempting Policy Uniformity

The RMA builds a national structure for strategically using natural resources. Various policies and statements give that structure form and influence specific natural resources decisions at the regional level.

The NZCPS leads New Zealand's attempt to provide a uniform approach to ocean renewable development. Being the only statutorily required national policy the NZCPS carries special significance. It drives how Regional Councils approach RCPs and uses within the territorial sea. It can also encourage development, as it does for ocean renewable energy. Likewise, it can announce new values for coastal uses that may not have received much attention, as it does for national surf breaks.[160]

However, that it is the only statutorily required policy is not surprising. The territorial waters are the most significant portion of New Zealand's jurisdiction subject to near-exclusive governmental control. That is, the government can regulate these waters without having to account much for international maritime law, as in the case for its Exclusive Economic Zone.[161] And unlike on land, central government does not share the CMA with innumerable owners. (This point is further analysed below). Establishing uniform policy for territorial seas is thus useful because it signals what the government will support for development (*e.g.,* ocean renewable power) and conservation (*e.g.*, national surf breaks).

RCPs flow from the NZCPS. Commentators appear to rate RCPs as having some effectiveness.[162] While that effectiveness might not always filter down to the district level,[163] it is valuable that coastal stakeholders can benchmark an RCP against the NZCPS to identify where any divergence might occur. Because of this, stakeholders can hold Regional Councils accountable for any RCP at odds with the NZCPS.

In short, having a hierarchy of policies creates some continuity through the levels of government as well as across the country. That continuity inures to the benefit of coastal users like ocean renewable developers.

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[160] Department of Conservation (n.d.), *New Zealand Coastal Policy Statement 2010*, Schedule 1.
[161] Hon. Dr N. Smith, N. (2011).
[162] *See e.g.,* Paert, R. (2009), p. 129.
[163] Ibid.

Coastal Permits *Per Se* Are Not Problematic

Where the NZCPS and RCPs form the government's overarching strategy for how the CMA should be managed, coastal permits are individual efforts to carve out one's own position in the CMA. From that perspective it is notable how simple and straightforward the coastal permit process is.

Indeed, procedural simplicity is one advantage of coastal permits. The applicant only has to apply to one agency for the permit. This is advantageous in itself. However, that advantage seems to be contingent on the scale of the project. If the project is non-notified or limited notified, as opposed to being publicly notified, the process is simpler and more straightforward; the applicant is unlikely to have to adjust his or her project because external parties raise issues. Moreover, it will cost the applicant very little in comparison to a publicly notified consent because the applicant will not have to attend and prepare for public hearings. In addition, the applicant is more certain to receive the consent without having to litigate at the Environment Court, which can add at least a year to a project.[164]

Regional Councils are also well-positioned to know users in proximity to project sites. Because locals make up the councils, they have a better understanding of local conditions than national agencies would. Therefore, coastal permit applicants can leverage Regional Council knowledge to identify the most appropriate local parties to consult with before the proposed project. And Regional Councils are willing to do this.[165]

Three New Zealand ocean renewable power developers exemplify these advantages. Wave Energy Technology-New Zealand (WET-NZ) recently secured non-notified consents to deploy a wave device near Lyall Bay, Wellington, and another one a few kilometres from New Plymouth, Taranaki.[166] WET-NZ acquired these consents in less than three months by taking advantage of all the features just described.[167] It sought only non-notified consents. It found out from the respective Regional Councils who the necessary parties would be to talk to. It did not overreach in terms of trying to deploy a lot of devices. And it pursued sites that are close to urban areas, and thus less likely to be perceived as 'pristine'. For all these reasons, WET-NZ minimised its costs and reduced opposition so it could test its pilot devices.

Similarly, Neptune Power in the Cook Strait and Chatham Islands Marine Energy Limited secured their coastal permits within six months.[168] These developers only proposed deploying a few (or less) devices, and both engaged with potentially affected parties and stakeholders early to ensure there would be little opposition. If there was opposition, they found a way to resolve it before applying for their coastal permits. In short, these projects demonstrate that getting a coastal permit is like getting the Red King: creating as little disturbance as possible is the best strategy.

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[164] Armstrong, B. (7 March 2011), Todd Energy. Pers. Comm.

[165] Lenz, A. and McClellan, C. (25 March 2011), Planner and Consent Specialist, Taranaki Regional Council. Pers. Comm. Lee, B. et al. (26 April 2011), Northland Regional Council. Pers. Comm.

[166] *See e.g.,* 54. Taranaki Regional Council (n.d.), Consents issued between 5 March and 15 April 2010.

[167] Huckerby, J. (18 April 2011), Director, Power Projects Limited. Pers. Comm.

[168] Beach, F. (27 May 2011), Director, Neptune Power. Pers. Comm. Venus, G. (1 June 2011), Director, Chatham Island Marine Energy Limited. Pers. Comm.

These experiences show two things. First is that coastal permits are not barriers *per se* to ocean renewable generator device deployment. Second, in order to obtain a coastal permit with minimal cost the developer has to constrain the number of devices, the location, and thus the ability to succeed financially. As the next section explains, the latter point is but one of the disadvantages of using coastal permits to allocate coastal space.

Disadvantages

Coastal resource consents combine the simple purpose of avoiding undue environmental effects with a much thornier function of allocating public space for (usually) private gain. The Crown (*qua* Regional Councils) cannot avoid these thorns as it is the sole decision-maker over coastal space allocation. While its ambit is protecting coastal resources for the multitude of users, its record is far from perfect.[169] Considering the vastness of the CMA and its importance to so many, the Crown ought to be forgiven for not always getting it right. But part of the problem may be the Crown's reliance on using coastal permits as both protection against environmental degradation and spatial allocation in the commons.

Governing the "Commons"

The "commons" is not a universally agreed upon term. It can variously mean universal access or public domain.[170] Elinor Ostrom – whose three decades of studying commons resource management won her a Nobel Prize in Economic Sciences – has a more nuanced view. Ostrom separates "commons" into distinct categories of common-pool resources versus common-property regimes (*e.g.*, information on the Internet versus the regime governing use of and access to that information), resource systems versus resource units (*e.g.*, rivers versus water extracted from rivers), open-access regimes versus common-property (*e.g.*, high seas versus a nation's Exclusive Economic Zone (EEZ)), and the sticks of the property rights bundle (*e.g.*, access right, exclusion right, management right, and alienation right).[171]

Coastal Marine Area as "Commons"

Viewed through Ostrom's model the CMA is a common-property regime because the government controls access over an area that is otherwise subject to widespread use and a low degree of being able to exclude others. Within that common-property regime the CMA covers the ocean, a resource system, out to 12 nautical miles from which users extract resource units like fish, fossil-fuels, nutrients for aquaculture, and space for wave energy.

In terms of what property rights user groups hold, there is a wide disparity but clear hierarchy within the CMA.[172] The Crown sits atop the hierarchy because it holds the

[169] *See generally* Boast, R. (2008).
[170] Hess, C. and E. Ostrom (2003), p. 114-115. *See also* Dolsak, N. and E. Ostrom (2003), p. 7 (explaining the general confusion of commons-related terminology and providing a definition for common-pool resource).
[171] Hess, C. and E. Ostrom (2003), p. 118-124.
[172] Ostrom and Schlager provide a useful table outlining how the more sticks a rights-holder has the

full range of rights.[173] These include access rights, exclusion rights, management rights, and alienation rights. For example, the Crown can pilot naval ships through the CMA (*i.e.*, access), mine for gold (*i.e.*, extraction), regulate the CMA (*i.e.*, manage), deny entry to foreign naval ships (*i.e.*, exclusion), and lease fossil-fuel extraction (*i.e.*, alienation). Arguably, Māori might be considered the next user down the hierarchy chain. Māori can boat in the CMA (*i.e.*, access), commercially, culturally, and recreationally harvest fish (*i.e.*, extraction), keep others out of tapu areas (*i.e.*, exclusion), and submit management plans (*i.e.*, manage). According to Māori I have talked with, the strength of their management impact is debatable. Māori have the right to submit management plans, but Regional Councils only need to "have regard to" these plans.[174] To the extent Māori management plans merely influence and do not actually regulate use, their management plans are unlikely to fall under Ostrom's definition of "management".[175] Just below Māori are coastal permit holders. Although they lack any management right, they can have a robust extraction right (*e.g.*, oil or gas), exclusion right (*e.g.,* Crest Energy's proposed exclusion zone), and a limited alienation right (*e.g.,* transferability). Finally, recreational users occupy the lowest rung because they only have access rights to do things like sail, surf or dive, and limited extraction rights for fish.

Coastal Marine Area Governance

As a common-property regime the CMA suffers from classic dilemmas like multi-use conflicts and free riding. In the words of a New Zealand ocean policy advocate, the marine policy engenders a "grave lack of trust among stakeholders."[176] That lack of trust emerges primarily because of how CMA space is allocated.

Ostrom has spent her career analysing and providing solutions for how resources within commons are managed. From over three decades of field and laboratory research Ostrom has concluded that solitary, central government control over common resources leads to failure.[177] One might be tempted to argue that, because Regional Councils approve coastal permits and thus coastal resource use, Ostrom's findings are not entirely applicable in New Zealand. However, that misses the critical point that Regional Councils are Crown agents. They derive their power from the Crown and they follow central government law.

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stronger its position vis-à-vis the resource. Schlager, E. and E. Ostrom (1992), p. 252.

[173] Until recently, the Crown held both *dominium* (land title) and *imperium* (sovereignty) over the CMA. In the MCAA the Crown divested *dominium* over the "common coastal and marine area." To this American-trained lawyer it remains a mystery how an entity can assert sovereignty over anything in which it lacks *dominium*. I leave explanation of that to my better-versed New Zealand peers.

[174] Resource Management Act (1991), Section 62, Paragraph 2(a)(i). *See* Magallanes, C. I. (2008), p. 121 (explaining how Regional Councils need only 'take account of' iwi planning documents and that the councils can and do override iwi plans).

[175] Schlager, E. and E. Ostrom (1992), p. 251.

[176] Paert, R. (2009), p. 129.

[177] Dietz, T., E. Ostrom and P. C. Stern (2003), p. 1910 ("Catastrophic failures often have resulted when central governments have exerted sole authority over resources. Examples include the massive environmental degradation and impoverishment of local people in Indonesian Borneo, the increased rate of loss and fragmentation of high-quality habitat that occurred after creating the Wolong Nature Reserve in China, and the closing of the northern cod fishery along the eastern coast of Canada partly attributable to the excessive quotas granted by the Canadian government.") (citations omitted); *see also* Schlager, E. and E. Ostrom (1992), p. 251.

Indeed, sole Crown power over the foreshore and seabed has resulted in the ineffective and inefficient results that Ostrom's work predicts. For example, an aquaculture "gold rush" of numerous applications for the same site immediately followed enactment of the RMA.[178] That led to the inequitable and inefficient aquaculture moratorium. And Regional Councils show a pattern of overriding Māori coastal uses or ignoring Māori opposition to coastal permit applications overlapping with those uses.[179] Importantly, the point is not that Māori *per se* have received inequitable treatment (although the pattern is striking) but that the coastal permit system gives the Crown *qua* Regional Councils carte blanche to disrupt or ignore existing coastal users. That situation creates uncertainty for investors, reduces incentives for development, and strains relationships and trust among ocean users and between the users and Regional Councils. This accords with Ostrom's finding, "When resources that were previously controlled by local participants have been nationalised, state control has usually proven to be less effective and efficient than control by those directly affected, if not disastrous in its consequences."[180]

Ostrom also criticises the use of imposed markets as an exclusive strategy to manage commons.[181] But what emerges in New Zealand is that stakeholders do not trust each other because the only recourse to solving coastal space conflict is resorting to legal remedies. Such recourse might be through the growing user-specific legislation or through litigating coastal permit applications.

In sum, relying on one strategy – whether central agency or imposed market – to control access, use, and tradability of a common resource is inefficient and ineffective. One major obstacle, though: agencies are loath to give up their powers.[182]

Inadequate Tools for Spatial Allocation

Regional Coastal Plans

Regional Councils must produce RCPs to set a broad agenda reflective of the NZCPS for coastal use within their respective coastal regions. But the drafting and revising for RCPs makes it too inflexible to handle unforeseen technologies or growth. According to the Taranaki Regional Council it can take roughly five years to revise an RCP.[183] During that time the council engages in a drawn-out consultation process.[184] If the Regional Council decides to divide up the CMA for specific commercial uses, like ocean renewable devices, that process also risks deteriorating into drawn out conflict and criticism.[185] Conflict of this sort would divert ocean renewable developers' resources to protect whatever patch the Regional Council proposes for their devices in this zoning process. Considering that these developers' resources are costly, that

[178] Magallanes, C. I. (2008), p. 123.
[179] Ibid. p.124 n.21, n.24.
[180] Schlager, E. and E. Ostrom (1992), p. 251.
[181] Dietz, T., E. Ostrom and P. C. Stern (2003), p. 1910.
[182] Magallanes, C. I. (2008), p. 132 (explaining that local authorities objected to customary title and rights process under the Foreshore Seabed Bill; such title and rights would have reduced local authority power or at least made them answerable to another party).
[183] Lenz, A. and McClellan, C. (25 March 2011), Planner and Consent Specialist, Taranaki Regional Council. Pers. Comm.
[184] Paert, R. (2009), p. 130 (describing how long it takes and expensive it becomes to prepare RCPs).
[185] Lenz, A. and McClellan, C. (25 March 2011), Planner and Consent Specialist, Taranaki Regional Council. Pers. Comm.

seems a poor way for them to protect space they may not want in the future as their technology changes.

And the likelihood of changing technology raises another problem with RCPs as spatial allocation tools. Whatever RCP emerges prevails over that region's slice of the CMA for ten years. But since major revisions take five years an RCP is actually in effect for fifteen years.[186] Predicting when new technologies will emerge or when existing technologies will change is difficult if not impossible. For example, ocean renewable generation barely existed ten years ago. In another ten years it is impossible to know how existing ocean renewable devices will change (and they will change), what new devices might be invented, and how resource needs and the footprint for any of these devices will grow or shrink. Therefore, relying on RCPs as tools to zone or allocate space for any one technology, especially one as nascent as ocean renewable power, is unwise.

Moreover, RCPs can differ markedly across the nation notwithstanding that each is supposed to reflect the same hierarchical documents. And yet a survey of Regional Councils' Regional Policy Statements shows scant interest in ocean renewable energy development. Only Environment Waikato and the Greater Wellington Regional Council propose to recognise the value of ocean renewable energy in their upcoming RPSs, but neither has done so yet.[187] A patchwork approach to ocean renewable energy planning could easily lead to ocean renewable developers jurisdiction shopping. Renewable energy developers exhibit this behaviour in England by targeting the Cornwall council because of its reputation for easier permitting.[188] Regulatory arbitrage of this sort is not helpful because it means ocean renewable developers chase favourable permitters rather than the best resource for their devices. The result is that there is not the most optimal use of the resources.

In short, RCPs are not ideal tools to address coastal space allocation for ocean renewable projects.

Coastal Permits

As mechanisms for allocating space, coastal permits are also problematic. The problem starts with Regional Councils, which being underfunded and poorly equipped to handle ocean policy and science are like the *Looking Glass*'s White Knight.

Decision-making

The decision-making process is the chief problem for why coastal permits cause so much distrust and conflict. First, the RMA gives consent authorities too much discrepancy. Coastal permit decisions must "have regard" to the NZCPS and the Draft NZES.[189] With the support those policies offer for ocean renewable energy devices one might be tempted to think a coastal permit application for ocean renewable

[186] Ibid. Lee, B. et al. (26 April 2011), Northland Regional Council. Pers. Comm.
[187] http://www.waikatoregion.govt.nz/PageFiles/10522/1560229-v7-RPS_WORKING_DRAFT.pdf and http://www.gw.govt.nz/assets/importedfiles/6218_ProposedRegiona_s12220.pdf
[188] Blair, D. (Energy Correspondent). (19 May 2011). North Sea tax, FITs, fuel price [Audio podcast]. Energy Weekly. Podcast.
[189] Resource Management Act (1991), Section 104, Paragraph 1(b)(iii)-(iv).

development stands a fair chance. But Regional Councils can follow the letter of the law and "have regard" without coming out in favour of these policies or plans.[190] That is because the RMA also allows consent authorities to have regard to any other relevant and reasonably necessary matter.[191] Giving consent authorities this much leeway means applicants are less certain of knowing what to expect or how to prepare.

Second, decision-making is marked by common perception that Regional Councils lack oceans expertise and resources to manage multiple ocean uses. Across the spectrum of stakeholders I interviewed the prevailing opinion is that Regional Councils lack ocean policy expertise and the funding to hire such experts. When I asked Northland Regional Council about this they agreed it was generally true for Regional Councils.[192] When asked whether Regional Councils should have a role in proposed EEZ permits Hon Nick Smith said they should not because of their lack of specialisation.[193] This is not to say that Regional Councils do not do the best with what they have. However, their reputation as decision-makers on oceans issues is marred by a perception of inadequate understanding and funding.

Third, the decision-making process all the way from Regional Council to Environment Court hearings fails to recognise *de jure* or *de facto* property rights. *De jure* property rights are lawfully recognised and governmentally granted, and the holder can resort to a government authority to enforce them.[194] *De facto* property rights are less secure because government does not grant them nor will it necessarily enforce them. Rather *de facto* rights emerge among resource users who enforce themselves.[195] In the CMA, commercial fishing interests have *de jure* property rights in the form of ITQs, which are governmentally-granted and -enforced perpetual rights for the ITQ owner to a share of a fish stock.[196] *De facto* rights exist among coastal users like surfers who enforce among themselves a custom of priority to catching waves.[197]

However, the RMA does not require recognition of either of these rights for coastal permit decisions. Newly consented activities cumulatively wear down these property rights.[198] In turn, reducing the strength of these rights incentivises rights holders to increasingly litigate or lobby to protect their rights. Crest Energy's tidal turbine project in Kaipara Harbour exemplifies this outcome because commercial fishing interests (*de jure* rights holders over snapper ITQ) and local iwi (*de facto* rights holders with a perceived right over the Kaipara Harbour) appealed the Northland Regional Council's approval of Crest Energy's application.

In sum, neither applicants nor existing users have certainty around decisions about

[190] Ibid. Section 104, Paragraph 1(c). *See also* Magallanes, C. I. (2008), p. 121 (explaining, in a different context, how Regional Councils can override the Treaty of Waitangi when weighing the full balance of interests for a specific resource consent application).
[191] Resource Management Act (1991), Section 41, Paragraph 4.
[192] Lee, B. et al. (26 April 2011), Northland Regional Council. Pers. Comm.
[193] Hon Dr N. Smith, (2011).
[194] Schlager, E. and E. Ostrom (1992), p. 254.
[195] Ibid.
[196] McClurg, T. (28 February 2011), Director, Toroa Strategy Limited. Pers. Comm.
[197] De Alessi, M. (2009), p. 88.
[198] Yandle, T. (2007), p. 11.

coastal permits.[199] That a consent authority can consider anything "relevant and reasonably necessary" – but not existing property rights holders – and does not have ocean expertise to identify or know what could be relevant or reasonably necessary adds to that uncertainty, which weakens the belief that decision-making is robust and trustworthy.

Submissions

The RMA allows any person to make a submission on a publicly notified consent application.[200] To paraphrase an energy insider, this virtually guarantees that any publicly-notified project generates a swarm of submissions out of which at least one will appeal the Regional Council decision to the Environment Court thereby adding at least one year to the project. An Environment Waikato official put it more succinctly: it encourages "vexatious comments."[201]

The democratic premise underlying this inclusion is laudable. However, the unlimited openness – allowing anyone regardless of their proximity to or connection with the applied-for project – could likely discourage ocean renewable development at the margins. First, it almost certainly increases the application time and costs both for the applicant, who will want to rebut adverse submissions,[202] and the consent authority, who has to filter through the submissions to make sure a person is a "person A" or "person B".[203] Moreover, the applicant must pay most of the hearing process costs. Second, the more permissive the submission process the greater the likelihood of litigation because the only standing requirement for a non-applicant to appeal a coastal permit decision is that the appellant made a submission.[204]

Applicants can limit submissions by getting the written approval of potentially affected parties beforehand.[205] On land, the counter-parties may have a distinct reason to sign their approval because they might own the land on which the renewable energy developer is leasing or buying space. Conversely, in the CMA no party may own the space; therefore, the incentive to sign away one's right to submit and thus appeal is reduced.

Again, Crest Energy's experience in Kaipara Harbour is informative. Crest Energy approached Te Uri o Hau and the two parties entered negotiations over a joint-venture.[206] These negotiations quickly dissolved. A number of reasons may explain why. However, the question remains: would their negotiations have succeeded if Te Uri o Hau had a more secure right in the foreshore and seabed? In comparison, geothermal energy development often takes the form of joint-ventures with Māori.

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[199] *See* Magallanes, C. I. (2008), p. 132 (explaining that even though the RMA accords a special position, they still have no level of certainty regarding the outcome of a resource consent.)
[200] Resource Management Act (1991), Section 96, Paragraph 2.
[201] Dickie, B. (17 March 2011), Programme Manager: Policy and Transport, Environment Waikato. Pers. Comm.
[202] Resource Management Act (1991), Section 98.
[203] Ibid. Section 96, Paragraphs 2-4.
[204] Ibid. Section 120, Paragraph 1(b). *But see* Resource Management Act (1991), Section 120, Paragraph 1(c) (allowing the Minister of Conservation to appeal restricted coastal activity resource consents, which would apply for many ocean renewable projects).
[205] Resource Management Act (1991), Section 95E, Paragraph 3(a)
[206] Hopkins, A. (12 March 2011), Director, Crest Energy. Pers. Comm.

Tellingly, Māori have a secure legal right over the geothermal resource.

Finally, whereas the RMA's purpose is to protect the environment writ large, submitters that have a *de facto* or *de jure* property right in the ocean use the submissions process to protect their interest. This is because, as pointed out above, they have no other recourse to protect their right. For example, commercial fishing interests opposed the Kaipara Harbour tidal project because they believed that it would negatively impact the snapper stock. Undoubtedly, the permanent harvest right of an ITQ gives commercial fish harvesters a long-term perspective on protecting their fish stock.[207] But these commercial harvesters and similarly placed rights holders must resort to the highly uncertain, indirect process of submissions and appeals to air their concerns with the proposed project.

Call-In Process Truncates But Does Not Eliminate Conflict

The call-in process brings decision-making power for coastal permits from the regional to the national level. While it might shorten the time between lodging the coastal permit application and the final decision it is not necessarily going to reduce conflict. If anything, it might make it more intense.

The call-in process opens procedural shortcuts for certain projects, but it does not change the substantive requirements of a coastal permit application. The applicant still has to prove that he or she will avoid, remedy, or mitigate any adverse environmental effect. And since called-in coastal permits will still allocate space they will likely continue to generate opposition as for a normal coastal permit. It might even increase the severity of that conflict because the truncated timeframe would put well-funded and legally-sophisticated opponents (*i.e.*, those with the most to lose) in a much more vociferous defensive position from the outset.

Moreover, the call-in process might even raise the hurdle against the applicants because the Minister of Conservation is the arbiter. Unlike Regional Councils, the Minister of Conservation is under the mandate to conserve the coastal environment, a more restrictive outlook than the RMA's sustainable management.[208] In that sense, it works as a heightened level of scrutiny that the applicant faces.

On the other hand, the call-in process may magnify inequity over coastal use decisions because it favours applicants who have the financial and legal wherewithal to prove "national significance." Poorly funded applicants will be less able to take advantage of the call-in process than well-resourced ones. Similarly, underfunded project opponents would have little chance of mounting effective opposition on their own. As an Auckland attorney described it, the call-in process "railroads opposition"

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[207] ENV-2008-AKL-292 Crest Energy Kaipara Limited v Northland Regional Council. Re: Crest Energy Kaipara Limited [Judge L J Newhook, A132/2009] - Interim Decision, p. 22.

[208] *See* Conservation Act (1987), Section 6, Paragraphs a-ab (mandating that the Departement of Conservation, under the Minister, manage natural resources for "conservation purposes"); *Compare* Conservation Act (1987), Section 2 (defining "conservation" as the preservation and protection of natural resources) *with* Resource Management Act (1991), Section 5, Paragraph 2 (defining "sustainable management" as "use, development, and protection of natural and physical resources …"). *See also* Rennie, H. (2006), p. 515 (discussing how the Department of Conservation was explicitly created to advocate for and conserve the environment, and was a major opposing force to aquaculture development).

to make way for a nationally significant project.

Marine And Coastal Area Act Constrains Ocean Development

When New Zealand passed the Foreshore and Seabed Act in 2004 fury ensued.[209] Four years later the National Party came to power along with a newly-formed Māori Party in the wake of the furore.[210] Part of their ascendancy rested on a promise of repealing the Foreshore and Seabed Act. The coalition government did so this year with the Marine And Coastal Area Act (MCAA). The Act repeals the Foreshore and Seabed Act, constrains ocean development, and offers restrained control for Māori.

Restraining Co-Management

The MCAA provides mechanisms for Māori to have co-management over the common marine and coastal area.[211] For example, it creates processes by which Māori can get a customary rights title, submit plans, and have a veto over certain uses in the common marine and coastal area.[212] It also grants co-management control through Māori-specific marine use plans.[213] But all this existed in the repealed Foreshore and Seabed Act.[214]

The MCAA seems to do more to constrain these co-management rights than allow for them. For example, it prohibits Māori from alienating their rights.[215] Although some Māori leaders told me that the inability to sell their rights is not troublesome, alienability is not limited to an outright sale. It also includes leases such as those Māori use for farming and onshore renewable energy production. Leasing provides a useful co-management tool without giving up long-term rights in the resource.

Moreover, the MCAA creates various ways for Māori to lose their co-management rights. The Minister of Land Information, for example, can waive a customary marine title group's permission right if the holder of that right fails to respond within three months to a Ministerial invitation to negotiate or if that group refuses to negotiate.[216] Even more draconian, if the customary rights group agrees to a coastal permit that would "have the effect of preventing, in whole or in part, the exercise of a protected right" then that group essentially relinquishes that right.[217] The troubling aspect here is that there do not appear to be any guidelines or definitions for how to determine whether an applied-for coastal permit would prevent the exercise of a protected right. In fact, all Māori I canvassed told me that, if their group succeeds in getting a customary right, they do not plan on relinquishing that right so long as their iwi or hapū exists. Thus even if their group accedes to a coastal permit with a thirty-five year limit, it is unlikely that will prevent them from exercising their customary right in

[209] Marine And Coastal Area Act (2011), *Explanatory note: General Policy Statement*, p. 201-1 ("The proposals in the Bill follow the significant opposition to the 2004 [Foreshore and Seabed] Act when it was enacted, and ongoing national and international criticism of that Act since that time.")
[210] 'New Zealand's new government', *The Economist*, 11 Nov. 2008.
[211] Marine And Coastal Area Act (2011), Section 7 (defining "common marine and coastal area").
[212] *See* discussion *supra* under 'Marine and Coastal Area Act (Takutai Moana) 2011'.
[213] Marine And Coastal Area Act (2011), Sections 84-91.
[214] Magallanes, C. I. (2008), p. 121.
[215] Marine And Coastal Area Act (2011), Section 63, Paragraph (1)(a).
[216] Ibid. Schedule 1, Paragraphs 4-7.
[217] Ibid. Schedule 2, Paragraphs 2-3.

"whole." Constraining customary rights holders in this way means they are less likely to agree with short-term coastal permits even though they might not see those consented projects *per se* as interfering with their long-term use of the rights.

Constraining Ocean Development

The MCAA also drastically limits incentives for customary rights holders to be willing participants in certain coastal permit projects. That is not the only constraint the MCAA puts on ocean development.

There is also the additional level of bureaucracy on top of the RMA. For example, MCAA requires the proponent of a new nationally or regionally significant structure or infrastructure – categories in which ocean energy devices would fall – to go through additional levels of bureaucracy if the project will overlap with customary marine title area.[218] Or when a project will overlap a customary marine title area it triggers a multiplicity of complications for the coastal permit process including additional consultation requirements,[219] additional coastal permit requirements,[220] and an additional layer of factors for consenting authority to consider.[221]

The MCAA also imposes a bias against development. In the context of customary rights holder decisions there are provisions that would prevent those holders from retracting or appealing their permission for certain development, which will almost certainly make the rights holders extremely conservative and risk averse.[222] Similarly, developers face a presumption of doubt when they are seeking approval for what is considered a deemed accommodated activity.[223]

In sum, the MCAA provides Māori some level of co-management but that appears tempered by constraints on that control and more reasons not to cooperate with ocean renewable power development than to cooperate.

Kaipara Harbour Case Study

Of the New Zealand companies with or applying for permits to deploy ocean renewable energy devices, Crest Energy is the only one that has (and continues) to experience severe opposition. The Environment Court said that Crest Energy's consultation efforts were "extensive, considerable and meaningful."[224] What then explains the continued opposition to Crest Energy's project proposal? The answer starts with the scale of Crest Energy's proposal, but probably is rooted in the unsettled property rights over the Kaipara Harbour mouth.

As opposed to other New Zealand ocean renewable developers, Crest Energy took the daring chance of proposing to build a commercial-scale array of 200 tidal turbines. It was the first in the world to receive consent to do so. Notwithstanding that the device

[218] Ibid. Schedule 2, Part 1, Paragraph 3.
[219] Ibid. Section 64, Paragraph 2; and Schedule 2, Paragraph 2.
[220] Ibid. Sections 65 and 91(5)(b).
[221] Ibid. Schedule 2, Paragraph 1.
[222] Marine And Coastal Area Act (2011), Sections 65, Paragraph 5 and 67, Paragraph 2.
[223] Ibid. Schedule 1, Paragraph 4.
[224] ENV-2008-AKL-292 Crest Energy Kaipara Limited v Northland Regional Council. Re: Crest Energy Kaipara Limited [Judge L J Newhook, A132/2009] - Interim Decision, p. 45.

it selected – the OpenHydro Turbine – is still undergoing testing and has never been mass manufactured, Crest Energy pushed ahead with its coastal permit application for a 35-year term. The other New Zealand ocean renewable power developers propose deploying no more than a few devices (if that) and only for a temporary period. In short, Crest Energy went big.

Size, though, may not have mattered as much as the lack of certainty Te Uri o Hau has over its interest in the Kaipara Harbour. The Environment Court noted, "the involvement of Te Uri o Hau rests on an underlying assertion of customary proprietary ownership of the seabed."[225] Indeed, Te Uri o Hau lodged a claim with the Crown for Territorial Customary Rights in 2009, three years after Crest Energy first applied for its coastal permits.[226] It did so, according to the Interim Decision, because it was concerned about the effect a decision by the Northland Regional Council and subsequent commercial development might have on its ability to secure these rights.[227] The court dismissed these concerns as not having a basis in law because coastal permits are neither real nor personal property.[228] However, the test for a customary protected right is "exclusive occupation" and that means that whether Crest Energy had a personal property interest in a coastal permit is beside the point. It would have occupied part of the site where Te Uri o Hau claimed its interest. That could have disrupted exclusive occupation.

Nevertheless, the Environment Court opined that the "the heart of the appeal" was Te Uri o Hau's commercial aspirations for the Kaipara Harbour.[229] Even if that were true that would neither diminish nor refute the importance of securing customary rights. In fact, it would be logical to pursue the customary rights before beginning any commercial development so that the holder of those rights would be more secure in its pursuit of commercial activities over the customarily-recognised area. A representative for Environs Trust (the organisation under which Te Uri o Hau brought suit) said if Te Uri o Hau had secured customary rights it would also have had an "'effective right of veto over development proposals.'" Undoubtedly, those rights would have mooted its motives to litigate against the Crest Energy project.[230] Moreover, if Te Uri o Hau had secured rights, the tentative negotiations that Crest Energy entered into with the hapu over a joint-venture may have actually been fruitful because both parties would have had more certainty over their relative bargaining position.[231] But that did not happen.

In the end, Crest Energy prevailed over Te Uri o Hau and the other appellants who brought suit over ecological concerns. On 17 March 2011, the Minister of Conservation fully granted Crest Energy permission to conduct staged development starting with environmental surveys and then deploying a few turbines at a time in

[225] Ibid. at 39.
[226] Ibid. at 40.
[227] Ibid. at 40-41.
[228] Ibid.
[229] ENV-2008-AKL-292 Crest Energy Kaipara Limited v Northland Regional Council. Re: Crest Energy Kaipara Limited [Judge L J Newhook, A132/2009] - Interim Decision, p. 41. Note, however, the Environment Court also recognised the Te Uri o Hau's concern over customary rights as a "key plank" for their case. Ibid. p. 40.
[230] Ibid. at 41.
[231] Hopkins, A. (12 March 2011), Director, Crest Energy. Pers. Comm. (discussing the early negotiations between Crest Energy and Te Uri o Hau over forming a joint venture).

numerous stages.[232] The process took nearly five years from the date Crest Energy first applied for its consents.[233]

When Alice went through the looking glass she found a topsy-turvy world. Similarly, if renewable energy developers move from the land to the ocean they unknowingly move through a legal looking glass. On land, developers and their investors have certainty about who occupies what land or resource. Such certainty allows them to more precisely plan when, where and how to apply for resource consents. In the ocean, though, the RMA upends that certainty. Developers and existing users alike struggle to understand who occupies what while Regional Councils keep shifting them around like chess pieces. Lifting that legal looking glass would remove an unnecessary distortion.

[232] Hon K. Wilkinson. (2011).
[233] Venus, G. (2011), p. 3.

4 TIERED RECOMMENDATIONS

The following recommendations proceed in order of least cost, easiest to achieve, and most politically feasible through to a full paradigm shift that will require a lot of work and strong leadership. Their combined purpose is to create incentives to promote inter-sector trade as an alternative to the reigning paradigm of conflict. It does this by increasing the strength of the incentives from the admittedly anodyne meeting between stakeholders through to a government overhaul of how coastal space is allocated.

Ocean Renewable Energy: Meet Your Neighbours

Ocean renewable energy developers as an industry must overcome certain barriers before they can successfully capture ocean energy. Technical barriers such as lack of commercial competitiveness against onshore power production can be overcome by engineering new designs. Community barriers are another issue. Coastal communities are starting to resist their presence.[234] Therefore, an ocean renewable energy association would do well to make early, frequent endeavours to make themselves welcome in the community.

Along those lines, ocean renewable energy developers should meet as a unified group with coastal users who have the most at stake as the industry develops. These users include coastal iwi and hapū, commercial and recreational fishing, aquaculture, shipping and navigation, and government bodies like Department of Conservation, Ministry for the Environment, and Regional Councils. The purpose of the meeting ought to focus on building relationships with these users who, ultimately, all have a common interest ocean use. Ocean renewable energy developers obviously have competitive commercial interests that they would rather not reveal. And they should not have to reveal those, nor should they use that as an excuse not to participate. In fact, being able to exercise those interests depends a lot on how well they can work with other ocean users over site selection. Strategy should not stand in the way of overall success.

In short, before as soon as possible the New Zealand ocean renewable energy association should host a weekend of roundtable discussions with the above mentioned groups with the twofold aim of developing relationships with their maritime neighbours and building rapport toward cooperation rather than conflict.

Regional Councils: Strengthen The Process

Regional Councils are coastal gatekeepers. The RMA may not explicitly imbue them with this power, but the *de facto* function through coastal permits is clear enough. As gatekeepers, they ought to set similar standards so coastal developers and users know similar treatment awaits them around the country. Presently, they do not. To that end, Regional Councils should standardise their RCPs to reflect the national support for ocean renewable energy.

They can do this first by standardising their RCPs through interim updates. They can also sign memoranda of understanding (MOU) that specify how Regional Councils

[234] Boisvert, I. (2011).

will assess applications for ocean renewable energy. This approach has precedence in renewable energy development. Environment Waikato and Bay of Plenty Regional Councils signed an MOU on geothermal development.[235] Their MOU stresses common management, need to share scarce technical know-how, and developing standardised policy approaches.[236] No reason exists why Regional Councils could not apply this practical, common-sense solution in the context of ocean renewable energy development. It will encourage inter-regional communication, sharing technical expertise, and reduce opportunities for regulatory arbitrage.

Second, Regional Councils should have to explicitly recognise existing ocean property rights in commercial fish stocks and customary title, where applicable, during the coastal permit hearing phase. Two reasons explain why. First, it would reduce the *ab initio* tendency for these rights holders to resort to legal conflict because they would have assurance within the coastal application process that their explicit rights enjoy explicit recognition. Second, such recognition would strengthen the institutional framework on which any future rights depend. Thus ensuring the certainty and security of these rights builds trust in the underlying legal institutions which in turn encourages newcomers.[237] Making this change will require amending the RMA's sections that describe what Regional Councils must consider when considering coastal permit applications.

Third, central government should assist Regional Councils by developing a strategic environmental assessment for all ocean renewable energy devices. Both Scotland and the United States completed full-scale environmental assessments for ocean renewable energy. The Scottish Strategic Environmental Assessment reviews the types of ocean renewable energy devices, records what the coastal environment includes, analyses possible impacts renewable devices might have on discrete features of the environment (*e.g.*, marine mammals and seascape), analyses the quantity and quality of the offshore resources for renewable energy production, and addresses any cumulative effects.[238] The American version covers much the same scope but also includes a section on potential mitigation measures that might reduce any impact that renewable energy devices may cause.[239]

Creating a similar document in New Zealand would have significant value. It would provide a baseline for Regional Councils to understand what is known and not known about ocean renewable energy and their potential beneficial and adverse impacts. It would give Regional Councils a neutral benchmark against which they could test scientific and technical studies that project proponents and opponents submit. It would also provide Regional Councils the template to conduct their own such assessments. Moreover, it would provide a strategic overview for New Zealanders to know where their wave, wind and tidal resources are strongest, but also where potential environmental concerns might be greatest. The National Institute of Water and Atmospheric Research already has a lot of this information.[240] Finally, an overarching

[235] Memorandum of Understanding Between Bay of Plenty Regional Council and Waikato Regional Council Geothermal Resource Management, signed February 18, 2010.
[236] Ibid. pp. 1-4.
[237] Boudreaux, K. and P. D. Aligica (2007), p. 88.
[238] Faber Maunsell and Metoc Plc (2007).
[239] U.S. Department of the Interior, Minerals Management Service (2007).
[240] Poulter, M. (28 March 2011), Chief Scientist, Atmosphere, Natural Hazards, & Energy, Pers.

environmental assessment would demonstrate to New Zealand's renewable energy entrepreneurs that the country is taking seriously its vast potential for offshore renewable power production and its reputation as clean and green.[241]

Central Government: Allow Occupants Choice

Competition does not have to decay into conflict. Yachters race without fighting each other and both are stronger in the end because of it. Conversely, conflict always comes from competition. Facebook attacks Google, not Budweiser.[242] The key is determining how to allow competition while minimising unnecessary conflict. Allowing coastal occupants choice to allocate space among themselves will go a long way toward that.

While New Zealand already practises a version of this in its oceans, commentators call for even more secure rights in the coastal setting. Regarding Māori use, Professor Magallanes says, "Rights based on title are more permanent and enduring and there is thus more need to provide for them in the longer term."[243] In the fishery context, Mark Gibbs of the Cawthron Institute argues that one way to reduce ocean conflicts is to extend property rights to small areas for fishing which they could accumulate.[244] Even the Waitangi Tribunal accepted that the recognition of exclusive occupation rights to parts of the coast extends back to before the Treaty of Waitangi.[245] There is also international precedence for inter-sector tradability of ocean space. In Canada, licence holders of traditional herring weir sites sold the licence for aquaculture.[246]

A Case for Marine Tradable Occupation Rights

Setting up tradable occupation rights in New Zealand will not be easy. Nor should it be. But if any country has an adequate basis for TORs it is New Zealand.

New Zealand's Legal Bedrock

New Zealand leads the world (along with Denmark and Singapore) in freedom from corruption.[247] That is owed in no small part to robust and strong underlying legal institutions. The respect for these legal institutions and laws themselves allows rule of law to prevail in New Zealand. In a positive feedback loop, strong rule of law supports independent judiciaries which further strengthen the rule of law. The strength of New Zealanders' property rights and trust in market transactions exemplifies the validity of this cycle.

Comm.

[241] Ministry for the Environment (2001).

[242] 'The Best of Enemies', *The Economist*, 12 May 2011.

[243] Magallanes, C. I. (2008), p. 141.

[244] Gibbs also notes possible drawbacks from this model, notably managing fisheries in "hundreds" of areas and issues with high-seas treaties. The former issue is largely a non-sequitur because recognising a spatial rights dimension for fishers will make them have to manage the fish and ecology in that area for their future harvests. The second issue of high-seas is irrelevant in this paper because it only addresses out to 12 nautical miles. Gibbs, M. T. (2007), p. 115.

[245] Waitangi Tribunal (2003), p. 54-57.

[246] Mikkelsen, E. (2008), p. 6.

[247]Transparency International (2010).

Reasons For Tradable Rights

Going from a fiat marine spatial allocation system to one based on tradability should not be taken lightly. Five reasons explain why the transition is sound.

The first two reasons are that tradable, exclusive occupation rights maximise the efficient allocation of scarce resources[248] and reduce rent-seeking behaviour.[249] Across disciplines New Zealand experts note the increased scarcity of CMA space as more users enter it. Ocean renewable energy is the most recent entrant, but it will not be the last. The increasing scarcity raises the value of CMA space to existing and new users. These users reflect that value through increased litigation to slow down consent decisions.

By contrast a tradable market would allow parties to engage in private transactions from which both would gain. That type of transaction as opposed to fiat decisions reduces the inefficiencies described above, and the money not spent during the coastal permit application can be spent on site enhancement, development, and so on.

Third, private transactions build trust between the transacting parties.[250] As opposed to coastal permit consultations, a one-off occurrence, market negotiations are based on long-term considerations because the participants are looking to future income and value of the present asset.[251] These negotiations build ongoing relationships especially when the traded good is familiar to the transacting parties.[252] These relationships thus have the potential to encourage mutual respect: a tenant depends on the landlord allowing access and the landlord depends on the tenant's rents. While there never is perfect symmetry, both the tenant and landlord gain from each other so long as they both cooperate.

Fourth, private transactions minimise externalities.[253] Centralised distribution of a public good such as ocean space distributes an asset at a variable, poorly-valued cost to the applicant. Without coastal occupation charges or royalties the only cost the applicant faces is from the coastal permit application, which does not compensate the public or existing users for their lost value in the public space. That foists an externality on the public, which possibly bears the cost of losing partial or full access to a public space without remuneration.

Fifth, and very important, is public revenue building. A TOR regime could provide a brand new revenue source for government. Considering that many interviewees told me how few governmental resources there are for ocean policy and governance it would seem useful to generate such fees from commercial users of the coastal environment. Government could generate revenue from fees on licence applications, from taxes on transactions, and from coastal occupation charges. Comprehensively these levies should not be set so high that they constrain TOR market liquidity. But they should be earmarked for ocean governance and distributed to Regional Councils and the central government body that would run the TOR programme. Finally, some

[248] Demsetz, H. (1967).
[249] Edwards, S. F. (1994).
[250] Boudreaux, K. and P. D. Aligica (2007), p. 49-53.
[251] Demsetz, H. (1967).
[252] Edwards, S. F. (2003).
[253] Demsetz, H. (1967).

of these funds could be used to build the national registry structure

Cultural Considerations

Creating a tradable market system needs to consider the cultural context.[254] Some ocean user groups may oppose the system. These especially include recreational fishers and boaters.[255] Indeed, whether New Zealanders writ large will accept an expansion of the existing ocean property rights is open to question. For example, there appears to be an almost religiously-held belief among the public that they should be able to freely access oceans and beaches.[256] Moreover, according to the GNS Science Māori liaison, Rawiri Faulkner, the historical fracturing of land ownership among certain iwi caused by vesting individual versus collective title predisposes some iwi to view alienability sceptically.[257] So any consideration of establishing TORs needs to carefully assess how different groups will react to the idea and how to modify TORs to account for those reactions.

Staged Implementation of Marine Tradable Occupation Rights

Implementing TORs should be done in a staged approach that starts with defining what rights will be allowed, creating a transition phase to allow those rights to be realised, and culminating in allowing registered participants to fully express their rights.

What Rights In The Ocean?

Creating a TOR regime will require deciding a number of questions as to what the TOR regime will allow and who can participate. The primary function of TORs should be to allow commercial ocean users the ability to trade their occupation of a certain site with any other interested, registered party. While the RMA already allows this, it limits the transfers to between coastal permit holders. The MCAA and Fisheries Act also allow rights- or quota-holders to transfer some level of their rights or quota.

Ideally, TORs should allow transferability, or alienability, across all commercial ocean uses. New Zealand policy makers should determine whether TORs alienability will take the form of long-term leases, sub-leases, or outright sale. However, they should bear in mind the importance of stability, security, and liquidity as factors for alienability.

Second, a TOR regime needs to be robust. Therefore, it should include as many participants as possible. Currently, there are a number of different property rights of type and kind in New Zealand's territorial waters.[258] However, there is no mechanism to allow, for instance, fishing interests to trade with coastal developers for space. Building a regime that allows all these users a single clearinghouse in which to

[254] Boudreaux, K. and P. D. Aligica (2007), p. 42.
[255] Yandle, T. (2007), and Hon. Dr N. Smith (2011) (discussing the "political nightmare" of trying to institute coastal occupation charges for "yachties").
[256] Risk, C. M. (2002), p. 300.
[257] Faulkner, R. (6 April 2011), Māori Liaison, GNS Science. Pers. Comm.
[258] Yandle, T. (2007).

conduct their trades will help develop robustness.

Third, the TOR regime needs to recognise that territorial waters are ultimately a New Zealand public good. Therefore, participants must be a New Zealand entity with a majority percentage ownership by New Zealanders. Additionally, the amount of space that can be held by one entity should be capped to prevent monopolisation; however, it can't be so small as to reduce the chance for a robust market to develop.

Finally, there is little reason why a TOR regime could not thrive while allowing recreational fishing and boating access, as well as any commercial and New Zealand naval navigation. Therefore, TORs should be subject to two types of easements. The first should allow small boat navigation (for example, under 15 metres) to recognise the public privileges of boating, fishing, and other enjoyment of the oceans. This easement might include limits on fishing gear types where renewable power devices are submerged. Individual TOR participants concerned about issues of public safety could apply to limit the easement over their site. The second easement should recognise the navigational needs of commercial and New Zealand naval traffic. In neither case should the underlying TOR holder be able to exclude or extract rent from passing vessels. In short, there is no reason a TOR regime could not coexist with navigation over territorial waters.

Transitioning to Tradable Occupation Rights

The transition from the current system to a TOR regime could start by recognising the *de facto* property regime that already exists in the territorial waters. Doing so could assist commercial ocean users in developing a tradable regime mindset.

The first step could be for Regional Councils to start charging commercial coastal users as allowed under the RMA. That would begin to close the gap of providing a public good for free. It would also give government a means to more accurately measure the economic value of their territorial waters.

A second step could be creating a coastal registry system. The registry should include every coastal permit holder, every ITQ holder and the holders of any derivatives of ITQ, every port and harbour, every aquaculture farm, and all customary uses (ranging from mataitai to protected customary right to customary marine title). The registry should include at the very least the users' geographic site in longitude and latitude, activity type, and contact information. This will build the platform of users to participate in a tradability regime, as well as catalogue for the government what assets and uses exist in the territorial waters.

A third step could be that before applying for a coastal permit an applicant must enter into good faith negotiations with registered users whose interests overlap with the footprint of the proposed development. These negotiations should establish a pattern and mentality of participants having to discuss their interests with existing users to possibly arrive at a compromise before the coastal permit hearing. It would also recognise what is now considered a best practice for coastal development. Importantly, the negotiating parties should not have to agree on anything, but they should be required to attest that they both entered into good faith negotiations.

Advantages to doing this include that it would be politically feasible, it would formalise current "best practice," it would create opportunities for parties to establish trust and gains from trade, and it would be easier to implement than a full-fledged TOR regime. The distinct disadvantage is that it would not create as strong an incentive for parties to reach any accord because their occupation of the site would still be subject to Regional Council decisions.

It may be that the transition phase is sufficient to cure the inefficiencies and ineffectiveness of the current regime. However, if it is not, the next step should be to create a full TOR regime.

Realising the Market

TORs should be constrained, tradable rights that allow users to allocate coastal space between themselves so long as they do not violate ecological thresholds that will still be set through coastal permits. Other constraints should include a limit on how many TORs one entity can have, a holder must be a New Zealand entity or citizen, and TORs should be subject to a general public easement. On the other hand, there should be no limit to using TORs for private conservation.

Based on the national marine registry established during the transition phase, the government should decide how it will allocate the initial right to the registered entities. New Zealand has experience in conducting these transitions. For example, the initial allocation of ITQs recognised the catch history of existing fishers and thereby allocated a share of fish stock based on that history. Arguably, the advantage of that system was that it was straightforward and based on known usage. The arguable disadvantage was that it privatised some of what was a public good without compensating the public. As another allocation example, the initial allocation of radio frequency used an auction system. That used a second-tier auction that was novel but probably more complex than necessary.[259] In the tradable occupation rights system, the government could do a hybrid allocation in which it tenders unoccupied space but recognises occupied space users through some sort of allocation system.

The initial allocation system should recognise existing marine spatial rights as they are practised as well as legally prescribed. Failing to do so will almost certainly jeopardise participation and buy-in from these rights-holders. For example, commercial fishers have *de jure* and *de facto* components to their quotas. The *de jure* component is the legislatively delineated quota management area (QMA) that establishes where quota-holders may exercise their rights. These QMAs, however, encompass far more space than one would actually find some of the target species. Paua QMA boundaries, for example, extend well offshore but paua rarely thrive beyond six metres of water since they prefer shallow subtidal zones.[260] The sedentary nature of species like paua results in a *de facto* spatial component to these quota rights where fishers resort to extra-legal self-enforcement to protect the actual patches of seabed from which they harvest sessile or sedentary stock.[261] The *de facto* nature of these quota rights may be more important than the *de jure* ones because it represents the spatial component that quota holders would be more invested in protecting since

[259] Sharpe, B. (14 March 2011), Professor, University of Auckland. Pers. Comm.
[260] Ministry of Fisheries (n.d.).
[261] Gibbs, N. (14 June 2011), Policy Analyst, Seafood Industry Council. Pers. Comm..

that is actually where the fish live and are caught.

Similarly, some iwi have *de jure* rights in the coastal environment as well as *de facto* rights. Their *de jure* rights include fishing quota, mataitai, and, where demonstrated, rights flowing from the MCAA. *De facto* rights would include areas over which iwi litigate to protect a perceived ownership that has no formal legal recognition.

Recognising the full scope of these rights will be critical for four reasons. First, it will establish immediate trust by the rights-holders that their interests are being recognised. Second, it will recognise the reality of ocean use rather than maintain a fiction that only the *de jure* rights matter to existing rights-holders. Third, it will allow holders of these rights to act collectively on their respective rights. For example, if a tradable occupation right is established in a particular, well-defined area quota-holders that have a right to fish within that area can bargain collectively to protect their rights, which will decrease transaction costs and increase a likelihood of success because there will be fewer competing interests. Fourth, recognising the *de jure* and *de facto* rights will make transparent actual usage of coastal waters which will assist in other resource management tools like MSP.

Whatever allocation mechanism the government selects, it should be straightforward and transparent. After initial site allocations the government should remove itself from managing the occupation of the allocated-space and let the market begin to work subject to government enforcement, environmental monitoring, and revenue collection.

TORs should give registered users the ability to lease their registered site to a new or registered user for up to the term the coastal permit applicant is seeking (the maximum of which is currently 35 years). To create liquidity, holders ought to be able to sell their right to the TOR. Importantly, a TOR right should not convey a development right – coastal permits should still be used for that purpose.

Another provision the government should consider is a licence to participate in the TOR regime. The licence should be a simple application with minimal requirements. Its primary function would be to ensure that the holder is a New Zealand-registered commercial entity or non-governmental organisation with offices in New Zealand, or iwi or hapū trust, board or other representative organisation. Licence holders should have access to the registry to see what TORs are for sale privately or being tendered by the government. The national registry should be established along the lines of FishServe. Indeed, FishServe's ambit could easily be enlarged to include new participants and a new function.[262]

Extremely important are the conditions that should accompany any TOR trade, sub-lease or registration. These include that all trades must be registered with the national registry service, statutes of fraud should apply, title insurance should be required, and, where necessary, a decommissioning bond should be required.

Finally, policy makers should consider geographic factors in establishing TORs. For example, it may be that a TOR regime is initially more useful in conflict "hotspots"

[262] Campbell, L. (4 April 2011), General Manager, FishServe. Pers. Comm.

than throughout all the territorial waters. These hotspots could provide test sites to work out the kinks a TOR regime will certainly have at the beginning. It may also be useful to consider places where no TOR regime should exist because that space is a marine reserve or the ecology is fragile and rare and thus inappropriate for development.

In short, creating a TOR regime will require innovation, patience, and experimentation. However, the value of working through initial mistakes will provide commercial and customary ocean users a flexible model to resolve their spatial conflicts, build trust, and establish a new market.

Legal Feasibility

The legal basis for creating a TOR regime exists in fractured parts in New Zealand's legislation. For example, the RMA, the MCAA and the Fisheries Act each have some level of transferability, but the transferability is confined to the parties governed by the respective acts. The arguable exception is that the MCAA allows customary titleholders some level of permission to permit non-rights holders to conduct activities in customary use areas. Nonetheless there would still be a need for new legislation that allows inter-sectoral trading between all marine users for occupation of space.

In line with the vision Hon Dr Nick Smith laid out in his speech on the Bluegreens Agenda, the Environmental Protection Authority could be the governing body for the TOR regime.[263] Indeed, to the extent any new legislation needs crafting it could be part of the coalition-led government's current initiative to expand oceans legislation to the EEZ.

When Alice finally arrived at the opposite side of the chess board she became a queen, the game ended, and she returned to reality. Along the way she had to endure bizarre adventures like an irascible Humpty-Dumpty, non-sensical Tweedle-Dee and Tweedle-Dum, and a carpenter and walrus gathering clams as friends only to bake them in the end. New Zealand ocean renewable energy developers face the potential for similarly bizarre encounters with arguments about dolphins that may or may not exist in certain waters, iwi who may or may not have legal title to tidal zones, and fishing interests protecting fish only so they can catch them later. For these developers it would be a boon not to have to endure so much uncertainty and bizarre behaviour. Fantasy fits well in children's' stories, but not in commercial reality.

[263] Hon. Dr N. Smith (2011).

5 BARRIERS TO IMPLEMENTATION

Eight years ago New Zealand was in the midst of comprehensive oceans policy reform. During that reform the government explicitly recognised the same problems this paper outlines: inter-sector coastal conflict, uncertainty, high transaction costs, ownership issues, and so on.[264] That ocean reform effort ultimately failed. Similarly, these policy recommendations, especially the tradable occupation regime, could fail unless barriers to implementation are not recognised and effectively managed.

Probably the most significant barrier is existing conflict fostered by individual sector legislation and unfinished questions over foreshore and seabed ownership. Inter-sector conflict, as noted, appears because a mix of agencies carry out separate legislation at differing governance levels. This entrenches the regulated industry into protecting that specific piece of legislation as well as lobbying those relevant agencies.[265] The 2003 Oceans Policy Secretariat recognised that "[t]here is poor integration of the Fisheries Act with other ocean statutes, in particular the Resource Management Act."[266] The same issue exists today albeit on a more complex level because of new and expanded legislation.

To combat the barrier of conflict the proponents of these policies should consider highlighting three points: (1) the recommendations would not repeal any existing marine legislation and would fit within the existing regimes; (2) the recommendations are designed to encourage trade and more decentralised decision making; and (3) the recommendations cut across marine legislation to promote dialogue about occupation between the sectors on their terms.

Public perceptions create another significant barrier. How the public perceives their "right" to unfettered beach and oceans access could prevent a tradable occupation regime. From the extreme end is a self-published jeremiad staking out an unfounded position that the MCAA amounts to "apartheid" whereby the government will give away public beaches to a favoured minority.[267] Notwithstanding poor logic, argument and factual understanding, this book should indicate to policy makers the strength of perception, even distorted ones. Repeated often enough perceptions can morph into myths and ultimately crystallise as fact. It would be a shame if public perception stood in the way of these proposals. To diffuse public opposition, policy makers should emphasise the following about this report's proposals: (1) they aim to reduce pressure on Regional Council time, effort, and resources; (2) they could raise funds to compensate the state on behalf of the public for commercial coastal use; (3) these funds would be used for improving oceans governance; and (4) the public easement would minimise any interruption to boating or fishing.

Another barrier is lack of funding specific to oceans policy. To a large extent that should not be an issue because the RMA gives Regional Councils the means to initiate coastal occupation charges, but they generally fail to do so. However, raising funds through taxes and levies on participants in a tradable occupation regime would be another way to generate money to fund ocean policy, governance and science.

[264] Oceans Policy Secretariat (2003a), p. 6-8.
[265] McGinnis, M. (2010), p. 19.
[266] Oceans Policy Secretariat (2003b), p. 7.
[267] Barr, H. (2010).

Opponents to this kind of charging are very likely going to be commercial ocean users who currently enjoy a free ride. They should accept the trade-off that more secure rights offer them in return for their paying to use public goods.

Finally, lack of leadership can be the stillbirth of any policy change. New Zealand's politicians and policy makers should recognise that they have been grappling with these issues for nearly a decade. New Zealand governs more than 17 times more ocean area than it does land area.[268] It is a maritime nation with a proud heritage extending back to its first human settlers. It can no longer afford more failure in terms of its ocean governance. Ocean renewable energy developers from around the world have told me how excited they are at the possibility of entering the New Zealand market. However, they are highly reluctant to invest here because of what they perceive as an intractable spatial allocation regime. New Zealand has all the tools to effectively create a rational, fair, marine tradable occupation regime. It is time for its leaders to recognise that ongoing spatial conflict limits economic opportunities and that allowing users themselves the chance to resolve conflict could promote trade, build a new market, and generate more public revenue.

[268] McGinnis, M. (2010), p. 18.

CONCLUSION

Elinor Ostrom observes that "all policies [are] experiments."[269] An important component of experimentation is recognising when it is not achieving the sought-after outcome. After nearly a decade of stalled ocean policy reform and unabating spatial conflict in New Zealand's territorial oceans it may be time to change the policy. Allowing commercial ocean users the opportunity to figure out among themselves a rational way to resolve spatial conflict while regulating their uses for environmental effects could offer the missing flexibility in today's policies. After all, when Maui's brothers refused to share bait with him he put blood from his nose on the jawbone hook which he used to entice the North Island to the surface. But for that ongoing spirit of ingenuity, New Zealand would not have a coastline to fight over.

Continuing the distorted incentives set up under the RMA's coastal space allocation regime all but ensures conflict will continue. New Zealand risks turning away potential renewable energy developers and investors interested in commercial offshore projects. Lifting the legal fiction that the RMA sets up between the land and the ocean could likely reduce the conflict and provide more certainty where at present very little exists. Commercial, governmental and indigenous stakeholders have all agreed that tradable occupation would be a welcome step in that direction.

[269] Ostrom, E. (2008), p. 15.

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APPENDIX – ACRONYMS

Coastal Marine Area (CMA)
Energy Efficiency and Conservation Authority (EECA)
Individual Transferable Quota (ITQ)
Marine and Coastal Area (Takutai Moana) Act (MCAA)
Megawatt-hour (MWh)
Megawatts (MW)
National Policy Standard (NPS)
New Zealand Coastal Policy Statement (NZCPS)
New Zealand Energy Strategy (NZES)
Quota Management Area (QMA)
Regional Coastal Plan (RCP)
Regional Policy Statement (RPS)
Resource Management Act (RMA)
Tradable Occupation Right (TOR)
United States (US)
Wave Energy Technology-New Zealand (WET-NZ)