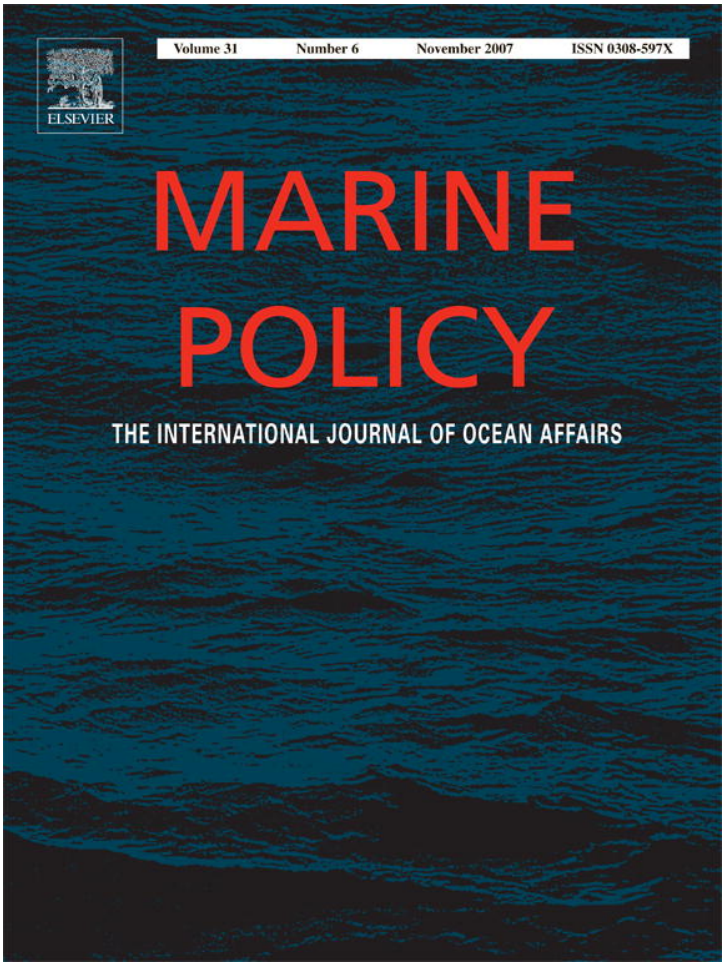

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Spatial conflicts in New Zealand fisheries: The rights of fishers and protection of the marine environment

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Abstract

New Zealand fisheries legislation provides commercial fishing rights to holders of individual transferable quota (ITQ). The settlement of fisheries claims against the Crown by Mäori, New Zealand's indigenous people, brought about the transfer of ITQ holdings to Mäori, and an obligation on the Crown to recognise and provide for indigenous (customary) fishing rights over fishing grounds and other areas that have been of special significance to Mäori. Some types of customary fishing areas exclude commercial fishing and could affect recreational fishing. Fisheries legislation requires that regulatory measures be put in place to avoid, remedy or mitigate the adverse effects of fishing. The Government also aims to protect marine biodiversity by having 10% of New Zealand waters in some form of protection by 2010. The legislative processes for protecting the marine environment and establishing customary fishing areas include assessment of effects on fishing rights. This paper explores the conflicts that arise from legislative obligations to uphold the rights of fishers, to sustain fishstocks and to protect the marine environment. The paper concludes that inconsistent legislative obligations and their disparate processes have led to spatial conflicts and a race for the allocation of space. Legislative obligations need to be integrated to maintain a balance between use of fisheries resources and protection of the marine environment.

Keywords: Individual transferable quota; Indigenous rights; Marine protected areas; Spatial conflicts; Oceans policy; New Zealand

1. Introduction

New Zealand's fisheries are perhaps best known for the quota management system (QMS) based on the allocation of individual transferable quota (ITQ). Since implementation in 1986, the QMS has been used to manage the majority of commercially valued species [1]. The QMS is designed to allow commercial fishers flexibility and discretion regarding when and by what methods to catch their ITQ holdings within the relevant quota management area (QMA). Commercial fishers have improved efficiencies by adjusting their ITQ holdings to match fishing activities and by targeting the most valued portions of QMAs [2].

The Fisheries Amendment Act 1986 (the 1986 Act), which established the QMS, was enacted when little social and political consideration was given to Mäori, New Zealand's indigenous people, and their claims that the Crown breached the Treaty of Waitangi 1840 (the Treaty). Although the Treaty does not have status in law, principles derived from the Treaty form the basis to claims that the Crown has breached its obligations to Mäori. The full and final settlement of Mäori fishing claims placed an obligation on the Crown to recognise and provide for Mäori indigenous (customary) fishing rights. Customary food gathering is defined as the traditional take of fish, aquatic life, or seaweed or management of fisheries resources to the extent that it is neither commercial in any way nor for pecuniary gain or trade. The establishment of some types of customary fishing areas exclude commercial fishing and could affect recreational fishing.

The QMS has also played a significant role in improving the biological status of fisheries resources [3]. The purpose of the Fisheries Act 1996 (the 1996 Act) is to provide for sustainable utilisation of fisheries resources, which includes avoiding, remedying, or mitigating the adverse effects of fishing. Regulatory measures under the 1996 Act for this

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purpose provide varied levels of protection for the marine environment. The marine environment is also protected by establishing marine reserves under the Marine Reserves Act 1971 (the 1971 Act). While the 1971 Act provides for limited fishing within marine reserves at the discretion of the Minister of Conservation, the Government has a no-take policy for such reserves.

The Government aims to protect marine biodiversity by having 10% of New Zealand waters within some form of protection by 2010, although the overall objective is for a comprehensive and representative marine protected area (MPA) network in place by 2020 [4]. Protection of 10% of New Zealand waters is in line with the international obligations set out in the United Nations Convention on Biological Diversity (CBD) to promote conservation of biological diversity and sustainable use of its components, which New Zealand ratified in 1993.

New Zealand waters comprise 4.8 million km^2, which is the fourth largest area under national jurisdiction in the world. New Zealand waters include any areas of the sea between the landward side of the 12-mile territorial sea and the 188-mile Exclusive Economic Zone (EEZ). The Ministry of Fisheries (the Ministry) estimates that currently 7.3% of the 12-nautical mile territorial sea is fully protected with marine reserves, though heavily weighted by two island-based marine reserves that together occupy 99.5% of the area, and 2.6% of New Zealand waters are in some form of protection.[1]

Spatial conflicts arise from legislative obligations to uphold the rights of commercial, recreational, and customary fishers, to sustain fishstocks and to protect the marine environment. This paper explores these conflicts. The first section discusses why spatial conflicts are a worldwide problem for coastal nations. The second section outlines the relevant legislative obligations in New Zealand. This section also describes a historical context to the provisions for customary fishing areas, which were integral to the settlement of Treaty claims to fisheries and helped secure the legitimacy of the QMS. The third section explores the causes of spatial conflicts and the race for the allocation of space. The final section outlines the New Zealand Government's solutions to the spatial conflicts and race for space, which focus on integrating inconsistent legislative obligations and their disparate processes so that competing rights to utilise fisheries resources are balanced with protection of the marine environment.

2. Spatial conflicts—a worldwide problem

As fisheries resources become scarce, near-shore marine areas become increasingly coveted by competing sectors [5]. Despite allocations of fishstocks that limit each sector's catch, conflicts continue over the amount allocated to each sector and access to the most valued fishing grounds. These conflicts intensify as coastal populations increase and the public becomes increasingly aware of the cumulative effects human activities have on the marine environment. At the same time, the public is placing higher value on marine biodiversity and complexity of marine communities, while considering some species to be worthy of moral concern [6].

The need to protect the marine environment from overuse has led governments to place higher priority on setting aside considerable portions of the marine environment in some form of MPAs. There are different types of MPAs ranging from areas that allow multiple use to full protection. It is estimated that less than 0.5% of the marine environment has some form of MPA designation [7], and approximately 0.01% is designated as no-take MPAs [8]. An increasing number of marine scientists and environmental organisations are calling for a greater proportion of the marine environment to be protected. The World Conservation Union recommends the establishment of a global system of representative MPAs with 20–30% of each habitat type designated as no-take MPAs by 2012 [9].

A primary challenge for coastal nations is the trade-off between utilising and protecting the marine environment. However, few studies have investigated the interactions between the establishment of MPAs and existing fisheries management systems. While MPAs are most often established to promote protection of marine biodiversity, debate continues regarding the extent to which no-take MPAs might contribute towards or undermine fisheries management objectives. Fewer studies have actually investigated the social challenges posed by no-take MPAs [10]. Closing parts of the coastal marine environment inevitably displaces some resource users, increases congestion on the remaining open fishing grounds, increases variable costs associated with the choice of fishing grounds, and adversely affects coastal populations by restricting or prohibiting access to local fisheries [11].

When considering the economic, social and ethical implications of establishing MPAs, fishing communities generally resist regulatory measures to exclude fishing from their usual fishing grounds [12]. As Sanchirico and Wilen [13] observe, whether or not valid from a legal point of view, large no-take MPAs are regarded by fishers as a potential 'taking' action, similar to other arenas in which government institutions expropriate 'property'. The sense of expropriation would be strongest for indigenous peoples who have historically experienced government policies eroding their fishing rights and their relationship with areas important to them. Similarly, it is unlikely that ITQ holders, whose allocations were based on historical use and equitability as a matter of law and economics, would perceive any benefits in re-allocating fishing grounds for non-extractive uses, especially if the MPA proposal lacks clear rationale [14].

[1]The amount of area under some form of protection is understated, as it only includes the area within marine reserves and seamounts where trawling is prohibited. The area within other types of existing regulatory measures will be considered against the MPA Policy and Implementation Plan's criteria for MPA designation, which is discussed later.

Governments are increasingly recognising the need to develop policy frameworks that address the wide-ranging effects that establishing MPAs have on marine activities. For example, the Australian Government has developed a framework that outlines a commitment to conserve marine biodiversity and secure fisheries access for displaced fishing activities [15]. This commitment has led to expansion of Australia's MPAs with a new 226.000 km^2 network in south-eastern waters. This network includes multiple use areas that have been adjusted to substantially reduce effects on commercial fishing, while compensation is made available to affected parties [16]. Compensation is also made available to affected parties for re-zoning the Great Barrier Reef Marine Park [17].

The lack of such an MPA policy framework in other nations, such as New Zealand, increases the difficulty government agencies have in explaining how the effects of establishing MPAs are addressed satisfactorily, even though they have successfully met relevant legislative criteria. The situation is more difficult in New Zealand where there is no provision for compensation paid to affected parties, and it is unlikely such provisions will be enacted in the future, despite their success in other nations.

As demand for various types of marine resource use increases, greater need arises for governments to develop overarching policy frameworks to guide decisions on regulatory and allocation decisions and the inevitable economic and social tradeoffs that must be made. New Zealand, like several other coastal nations, is developing such a framework, referred to as the Oceans Policy, which may resolve spatial conflicts and ensure a balance between protecting the marine environment and deriving the greatest possible benefits from resource use.[2]

3. Legislative obligations

3.1. Commercial fishing rights

In New Zealand, the rights of ITQ holders were secured under the 1986 Act and subsequently the 1996 Act, with respect to initial ITQ allocations and their legal definition. While the courts have determined that ITQs have many of the characteristics of property rights, and these rights cannot be rendered ineffective, ITQ holdings are subject to the provisions of the legislation under which they were established [18]. ITQ holdings allow commercial fishers the right to harvest a proportion of the total allowable commercial catch (TACC) within the relevant QMA. At the start of each fishing year, ITQ holders are allocated annual catch entitlements (ACE) commensurate with their proportions of the TACC. Although fishing permits provide the right to take QMS species, fishers who do not have ACE for their targeted catch and bycatch must pay deemed values, which are penalties set at levels that make fishing unprofitable.

The QMS and the allocation of ITQ is less suitable for managing the marine farming sector since it does not have a fixed output as do wild-stock fisheries [19]. In late 2004, aquaculture reforms were enacted to reconcile spatial conflicts between wild stock and farmed fisheries and to improve the planning process for use of coastal space, which is now the responsibility of local government authorities [1]. Marine farms have been established throughout coastal waters and total 121 km^2. There are numerous outstanding marine farm proposals that total 272 km^2.

3.2. Recreational fishing rights

New Zealand's significant recreational and charter boat fisheries are managed outside the QMS by a range of species-specific input and output controls and do not require individual licenses or permits. Although the 1996 Act does not explicitly provide for recreational fishing rights, the Minister of Fisheries (the Minister) makes allowances for recreational fishing when allocating a total allowable catch (TAC) [20]. Approximately one-third of the population fishes for recreational purposes, and many regard 'fishing for food or fun' as something akin to a 'birthright for all' [21]. This perspective continues to hinder the Ministry's efforts to more clearly define recreational fishing rights. As a result, the allocation of TACs between commercial and recreational sectors has been a source of longstanding tension.

Section 311 of the 1996 Act allows for regulations to be made under Section 297 that close areas to commercial fishing for a stock or prohibit a commercial fishing method in an area for the purpose of better providing for recreational fishing, provided certain criteria have been met. Section 297 regulations have been used to establish two 'marine parks' that are closed to commercial fishing and, with local support, further restrict recreational fishing. Special legislation has been used to establish three other areas that exclude commercial fishing and further restrict recreational fishing.

3.3. Customary fishing rights

During the colonial settlement of New Zealand, Mäori viewed the signing of the Treaty of 1840 as a way to preserve their autonomy and retain control of their land and sea. The Treaty explicitly states that Mäori have rights to their natural and cultural resources. The English-language version of the second article of the Treaty states the Queen of England guarantees Mäori 'the full exclusive and undisturbed possession of their Lands and Estates Forests Fisheries and other properties which they may collectively and individually possess …'. The second article in the Mäori-language version, however, guarantees Mäori

[2]The New Zealand draft Oceans Policy is in line with the CBD definition of marine spatial planning, which is to integrate the management of land, water and living resources to promote conservation and sustainable use in an equitable way.

chiefs *tino rangatiratanga* (unqualified exercise of their chieftainship over their lands, villages, fisheries and all their *taonga* (treasure)) [22].

Soon after the Treaty was signed, Government actions and legislation began to erode Mäori rights until most, if not all, that were guaranteed by the Treaty were alienated from them [23]. The 1986 Act made no reference to Mäori having customary or Treaty-based fishing rights. Many Mäori objected to the QMS, as it was seen to force their severance from the ocean, raid their sea resources and sell their right to participate in fisheries while others were allowed access to their fishing grounds [24]. In 1987, the High Court declared an injunction against further ITQ allocations. Mäori and the Crown entered into negotiations on how Mäori fisheries might be given effect in light of *tino rangatiratanga* [22]. While implementation of the QMS prompted Treaty-based claims to large areas of fisheries, it proved to be an effective means of resolving these claims through the transfer of existing ITQ holdings and new holdings on the introduction of further species into the QMS [1]. The Crown also enacted legislation to provide for and recognise the exercise of customary fishing rights [22].

3.3.1. Taiäpure-local fisheries

The Mäori Fisheries Act 1989 was enacted, in part, as an interim settlement that includes provisions to recognise *tino rangatiratanga* by enhancing Mäori involvement in the control and management of fisheries through the establishment of taiäpure-local fisheries. Under Sections 174–185 of the 1996 Act, taiäpure-local fisheries can be established in relation to areas of New Zealand waters (being estuarine or littoral coastal waters) that have customarily been of special significance to any *iwi* (tribe) or *hapu* (collection of extended families) either as a source of food or for spiritual or cultural reasons.

A taiäpure-local fishery proposal must explain how the area is important to local Mäori, why the taiäpure-local fishery is needed, what types of controls are proposed to achieve the objectives of the taiäpure-local fishery, and the likely effect on other users of the area. The 1996 Act does not specify any minimum or maximum size for the area within a proposed taiäpure-local fishery. However, legislative criteria restrict the area in which proposed taiäpure-local fishery can apply. It is possible that the boundaries of a proposed taiäpure-local fishery could be amended in response to the effect it would have on the general welfare of the local community and those who have a special interest in the area.

Once a taiäpure-local fishery proposal has been approved, the Minister appoints a management committee from those nominated by the local Mäori community. The committee has the right to recommend the making of regulations to the Minister for the management and conservation of the taiäpure-local fishery. Fishing activities within the taiäpure-local fishery continue unchanged until the committee recommends the making of a regulation, and the Minister approves it. Until such time, all fishers must comply with existing regulations. There are eight taiäpure-local fisheries that range in size from 3 to 137 km^2, totalling 328 km^2. Since the late 1990s, Mäori interest in establishing taiäpure-local fisheries has diminished due, in part, to the duration of time required for the legislative process when compared to that required for establishing mätaitai reserves.

3.3.2. Mätaitai reserves

The 1992 Fisheries Deed of Settlement (the Deed of Settlement) and the Treaty of Waitangi (Fisheries Claims) Act 1992 (the Settlement Act), which legislated the Deed of Settlement, provided for the full and final settlement of Mäori fishing claims and confirmed that Mäori customary fishing rights had not extinguished and continued to give rise to obligations on the Crown. These obligations led to enactment of the Fisheries (Kaimoana Customary Fishing) Regulations 1998, which apply to North Island waters and the waters around the Chatham Islands, and the Fisheries (South Island Customary Fishing) Regulations 1999, collectively referred to as the customary regulations. Customary food gathering areas established under these regulations are referred to as mätaitai reserves. The customary regulations provide for the Minister to appoint *Tängata Kaitiaki/Tiaki* (local guardians) whose purpose is to manage fisheries resources for customary purposes by issuing customary fishing authorisations within their *rohe moana* (territorial waters). The *Tängata Kaitiaki/Tiaki*, or those who nominated them, can apply to the Minister to establish a mätaitai reserve within their *rohe moana*. Upon being satisfied that the proposal has met all the regulatory criteria, the Minister must declare the proposed area to be a mätaitai reserve. With respect to effects on fishing activities, the criteria outlined in the customary regulations include that the proposed mätaitai reserve must not:

- unreasonably affect the ability of the local community to take fish, aquatic life or seaweed for non-commercial purposes; and
- prevent persons with a commercial interest in a species taking their ITQ or ACE within the remainder of the QMA for that species.

The customary regulations do not specify any minimum or maximum size for the area within a mätaitai reserve. The regulatory criteria provide broad guidance on the area in which the proposed mätaitai reserve can be established. It is possible that consideration of the regulatory criteria could result in changes being made to the boundaries of a proposed mätaitai reserve to mitigate the effects it has on either commercial or recreational fishing activities.

Upon the establishment of a mätaitai reserve commercial fishing is excluded from the reserve. However, the appointed *Tangata Kaitiaki/Tiaki* have the power to recommend to the Minister the making of regulations to reinstate the commercial catch of specific species by

quantity or time period. Recreational fishing continues to occur within a mätaitai reserve under existing regulations until such time as the Minister approves any bylaws recommended by the *Tangata Kaitiaki/Tiaki* for the management of the mätaitai reserve. In practice, the six established mätaitai reserves are relatively small in size, ranging from 0.3 to 77 km^2, with one covering approximately 10 km of a freshwater river in the South Island. The total area of all six mätaitai reserves covers 136.8 km^2. However, there are 11 outstanding proposals that range in size from 0.018 to 714.7 km^2, totalling 880 km^2, and more proposals are being considered.[3]

3.4. Protection of the marine environment

Fishing regulations under Section 297 are also used to meet the legislative obligation in the 1996 Act to put in place measures to avoid, remedy or mitigate the adverse effects of fishing. Section 297 regulations have been used to protect seabirds, marine habitats and ecosystems by restricting fishing methods, such as set nets and longlines that have an effect on seabirds, and by prohibiting bottom disturbing fishing methods over sensitive habitats.

The Ministry's efforts to fulfil the legislative obligation with respect to the adverse effects of fishing have focused on implementing the Strategy for Managing the Environmental Effects of Fishing (SMEEF) [25]. The SMEEF incorporates some aspects of ecosystems-based management into single-species management by identifying habitats or species at risk from fishing and establishing environmental performance standards that are used to inform decisions about the delivery of regulatory measures, such as area closures and restrictions or prohibitions on fishing methods.

The 1971 Act provides for the establishment of marine reserves within the 12-nautical mile territorial sea, which is administered by the Department of Conservation (the Department). Marine reserves are established for the purpose of preserving areas in their natural state for scientific study. When the Minister of Conservation decides to establish an area as a marine reserve, Section 5(9) of the 1971 Act requires the Ministers of Fisheries and Transport to concur with that decision. If either Minister withholds concurrence, the proposed marine reserve cannot be established. Section 5(6) of the 1971 Act outlines the criteria to establish a marine reserve. With respect to fishing activities, a marine reserve cannot have an 'undue interference' on commercial fishing, and it cannot have an 'undue interference' or 'adverse effect' on usage of the area for recreation of which recreational fishing is a part. However, an interference or effect may or may not be undue or adverse, depending on the circumstances or the benefits of the marine reserve.

Effects on customary fishing rights are not expressly mentioned in Section 5(6), as the 1971 Act predates the Settlement Act. However, effects on customary fishing rights fall within the consideration under Section 5(6)(e)—'Otherwise be contrary to the public interest'—and must be given due weight in the Minister of Fisheries' concurrence decision. In addition, the 1971 Act is linked to the Conservation Act 1987, which specifically provides that the principles of the Treaty of 1840 be 'given effect' under that statute and those linked to it.

The 1971 Act does not specify any minimum or maximum size for the area within a marine reserve. Between 1977 and 2005, 31 marine reserves were established, and four further proposals are currently awaiting Ministerial consideration. The existing marine reserves range in size from 0.93 to 7480 km^2, totalling 12,730 km^2. The four outstanding proposals total 526 km^2.

4. The causes of spatial conflicts

Spatial conflicts occur when there is competition between the different sectors to utilise the same marine area and with those who propose some form of protection for the same area when the protection would exclude or restrict some or all utilisation.

4.1. Inconsistent legislative obligations and their disparate processes

Spatial conflicts intensify when competing uses of fisheries resources and varied levels of protection for the same area are recognised in legislation. Implementation of inconsistent legislative obligations sometimes causes government agencies to disagree about the extent and the way to utilise fisheries resources and protect the marine environment. For example, the purpose of the 1971 Act requires the Department to give priority to setting aside areas as marine reserves for scientific study. The establishment of a marine reserve, along with the Government's no-take policy, prevents the Ministry from taking actions to uphold the purpose of the 1996 Act to provide for sustainable utilisation.

Legislative obligations are also inconsistent in the way fishing rights are defined. An ITQ holder's right is defined as a proportional quantity of a fishstock. This right only applies to the relevant QMA, which is typically large in size. The ITQ right does not provide exclusive access to the QMA, as recreational and customary fishers can also access the area. Customary fishing rights are not defined by quantity, as the Settlement Act does not state the amount or proportion of fish to be taken for customary purposes [22]. In addition, fishing for customary purposes is not

[3]The only other legislation that recognises customary rights is the Resource Management (Foreshore and Seabed) Act 2004. This legislation recognises territorial customary rights for any group of Mäori or non-Mäori that can prove exclusive occupation and use and meet the other criteria of the legislation. A group that has exclusive use and occupation of a part of the public foreshore and seabed can apply to the High Court for a finding that the group would have had territorial customary rights over that area. The application process for territorial customary rights is entirely separate from that for a taiäpure-local fishery or mätaitai reserve.

subject to size restrictions, bag limits and other regulatory measures, as are commercial and recreational fishing. Customary fishing rights do not provide Mäori with exclusive access, although mätaitai reserves exclude commercial fishing unless the Minister agrees to reinstate it. Both mätaitai reserves and taiäpure-local fisheries have the potential to affect recreational fishing through the making of regulations or bylaws approved by the Minister, which generally apply to all persons, including Mäori. Because of the Government's no-take policy, marine reserves exclude all fishing activities. Similarly, some areas closed under the 1996 Act exclude all fishing activities, while other areas restrict or prohibit particular fishing methods. Marine farming provides the right to establish structures and occupy coastal space. In practice, these structures exclude or impede other fishing activities.

As expected, ITQ holders generally consider their rights have been continually eroded during the last two decades through the reallocation of space within QMAs for customary fishing areas, marine reserves and marine farms. At the same time, some Mäori may conclude that the recognition and provision for customary fishing areas addresses the perceived shortcomings of the QMS when it was first implemented. Similarly, the Department, conservation groups and others might conclude that the Government's priorities for protecting the marine environment are needed to restore a balance between utilisation and protection.

The processes to establish spatial tools that restrict or prohibit utilisation of fisheries resources or protect the marine environment are demand driven, in that the relevant process must commence upon receipt of a proposal. However, the processes are disparate with respect to each requiring discrete and separate Ministerial decisions, and any consideration of outstanding or possible future proposals for a given area is generally regarded as irrelevant to the Ministerial decision. This situation exacerbates existing spatial conflicts, as the public realises allocations are also based on spatial access. This realisation sends the clear signal that proposals for spatial tools are addressed on a first-in, first-served basis, which then causes those who can to race for the allocation of space.

4.2. Opposition to spatial tools

The common public response to a race for space is that each user group advocates for its preferred spatial tool and objects to other types of proposals. Even though some may support the concepts behind proposals for particular spatial tools, they may respond with 'not in my backyard'. Some object to any proposal, as they perceive no end to the use of more spatial tools that would, or have the potential to, encroach on their fishing areas and activities. Such objections have some merit in light of the ad hoc approach to determining where marine reserves and customary fishing areas are proposed. Marine reserve proposals can be put forward by any of the thirteen regional offices within the Department, as well as other government and non-government agencies, including fishing interests that meet the applicant criteria in the 1971 Act, which has resulted in some regions having several marine reserves and others having none. Similarly, the Treaty obligations on the Crown could conceivably allow Mäori to propose that customary fishing areas be established over most, if not all, coastal areas, and with some areas extending offshore. However, their proposals must meet the relevant legislative or regulatory criteria. In so doing, the Minister may require amendments to proposals to reduce or mitigate the effects on particular fishing activities.

4.2.1. Marine reserves

Many commercial fishers consistently oppose marine reserve proposals, as they perceive no direct benefits for their fishing activities, though at least two marine reserves had commercial fishing interests as applicants. Commercial fishers largely do not accept that areas should be set aside in their natural state for scientific study, as allowed under the 1971 Act. Commercial fishers typically contend the QMS provides sufficient protection for all species managed within it, and that the QMS, along with other regulatory measures under the 1996 Act, can be used to protect the marine environment. In early 2006, a draft accord was reached between the Minister and deepwater commercial fishers to close 1.2 million km^2 to bottom trawling and dredging. The proposed closed area is equal to 25% of New Zealand waters, or 31% of the EEZ, and includes areas that have had little or no bottom trawling or dredging in the past. The draft accord is said to be the largest single marine protection measure ever proposed within a nation's jurisdiction [26]. The draft accord demonstrates commercial fishers' contention that the marine environment can be protected without use of marine reserves, though it would only protect deepwater benthic habitats and demersal species, not the ecosystem. The Minister considers the draft accord to be an 'unprecedented win–win' for conservationists and commercial fishers and has called for public consultation before the Government considers the proposal [27].

Recreational fishers generally object to marine reserves for the same reason as commercial fishers, although they have been joint applicants and have supported some marine reserve proposals. A significant number of Mäori express fundamental opposition to the very concept of marine reserves on the grounds that they interfere with customary fishing rights, though in at least three cases Mäori have been joint applicants for marine reserves. Mäori typically prefer to manage the marine environment by way of taiäpure-local fisheries or mätaitai reserves so that future generations are not prohibited from utilising an area.

4.2.2. Customary fishing areas

Some commercial fishers do not accept that recognition and provision for customary fishing rights was a critical

component of the Deed of Settlement, which settled Treaty claims relating to fisheries and helped secure the legitimacy of the QMS. Nonetheless, a failure to provide the redress required by the Deed of Settlement and the Settlement Act has the potential to undermine both the Deed of Settlement and the QMS on which the interests of all fishers depend. Both customary fishing rights arising from the Deed of Settlement and commercial fishing rights provided under the QMS cannot veto the other; legislation requires these rights to coexist [28].

Other commercial fishers do not object to the establishment of customary fishing areas, so long as they exclude highly productive and commercially valued fishing grounds. However, they have expressed concern that the customary regulations do not specify the size of the area that can be included within a mätaitai reserve or the timeframe for identifying and establishing mätaitai reserves, both of which create uncertainty for the future of some commercial activities. The Settlement Act does not provide any guidance on the extent to which customary fishing areas can be established [22]. Commercial fishers have also expressed concern about the recent increase in the number of mätaitai reserve proposals.

The allocation of ITQ to Mäori through the Settlement Act creates some conflict for particular *iwi* as they seek both financial gain from their ITQ holdings and establishment of customary fishing areas. Like other ITQ holders, the conflict for *iwi* arises when customary fishing areas include valued fishing grounds for the take of QMS species.

4.2.3. Competition with marine farming

The new management system promulgated through the aquaculture reforms addresses spatial conflicts when assessing proposed aquaculture marine areas. The system provides for consideration of effects marine farming has on existing fishing activities. Should the proposed marine farm be deemed to have an 'undue adverse effect' on non-commercial fishing, it cannot be established. However, in terms of commercial fishing, the prospective marine farmer can enter into a voluntary agreement with affected fishers for wild stocks. Provided an agreement can be reached, the marine farm can be established [2]. Since marine farming requires use of coastal space, the sector's continued growth will contribute to the cumulative effects utilisation of space has for a given area.

4.2.4. Cumulative effects

The pace of competition for coastal space has increased due to the heightened awareness amongst Mäori about the availability of customary fishing areas, the growth in the marine farming sector and the Government's actions to protect more of the marine environment. The rights for ITQ holders were first established at a time when there were only two marine reserves totalling 24 km^2, though some other proposals had been put forward. At that time, there were no customary fishing areas established under the customary regulations. In the years following legislative recognition of customary fishing rights, the establishment of taiäpure-local fisheries did not conflict with ITQ rights. That is still the case, as none of the management committees for the eight taiäpure-local fisheries has recommended any regulatory measures that have been enacted. Establishment of mätaitai reserves was not possible until the customary regulations were enacted in the late 1990s. The six established mätaitai reserves have little or no effect on commercial and recreational fishing activities. Since 1990 establishment of the remaining 29 marine reserves has occurred at a fairly consistent pace, with most causing spatial conflicts with some or all fishing sectors.

There is no legislative prohibition against establishing multiple taiäpure-local fisheries, mätaitai reserves, marine reserves, other regulatory measures and aquaculture ventures within a given area. As each additional proposal succeeds, spatial conflicts with other users increase, likely causing subsequent proposals to require amendments to reduce or mitigate effects on particular fishing activities. Eventually a point will be reached when a given area cannot include any further proposals that have an effect on some or all fishers in that area. However, there is no legislative guidance regarding when this point will be reached and what social and economic tradeoffs should be made.

Nonetheless, by definition the 'undue interference' 'unreasonable effect' and 'prevent' criteria contained in 1971 Act and the customary regulations are weighted in favour of existing rights to utilise fisheries resources. These criteria recognise existing rights and limit the extent to which other rights can affect them. However, the 'undue interference' and 'unreasonable effect' criteria are subjective in that they are at the discretion of the Minister's determination of what constitutes 'undue' and 'unreasonable'. Although the 'prevent' criterion is more objective, it still requires the Minister to use judgement about future effects on ITQ holders caused by establishment of a mätaitai reserve. Ultimately, determining when, or if, a competing right has had too much effect on an existing right can be based on quite different perspectives.

5. Solutions to spatial conflicts

It could also be argued that solving spatial conflicts involves reviewing and redefining fishing rights for all sectors so that these rights have greater similarity with respect to access to particular areas. Exclusivity and perhaps tradability between rights could form the basis for the review. Some within the seafood industry advocate fishstock allocations be based on a 'common currency' to facilitate negotiated settlements between fishing sectors 'without political interference' [29]. While some recreational fishers would support redefining all rights, others would likely resist due to concern that their perceived 'birthright' to fish might be successfully challenged. Similarly, some Mäori might resist reviewing customary

fishing rights out of concern that the right could be curtailed in some way. However, no plans have been made to review the basis to all rights for utilising fisheries resources.

The Government's solutions to spatial conflicts and the race for space seek to integrate other inconsistencies in the legislative obligations and their disparate processes. This integration will occur primarily through the Ministry's use of fisheries plans and the Ministry and the Department working to establish a network of MPAs, as well as legislative changes and policy developments to improve cooperation between government agencies and clarify priorities for management of the oceans.

5.1. Fisheries plans

Section 11A of the 1996 Act provides for the development of fisheries plans, which are approved by the Minister. The Ministry has signalled its intention to develop a more integrated approach to the management of fisheries through the development of fisheries plans [30]. Fisheries plans could also facilitate commercial and non-commercial fishers putting forward specific management proposals that better meet the needs of particular fisheries and the aspirations of those who use them [2]. There are no strict legislative requirements regarding what fisheries plans should include. However, they must meet all relevant legislative obligations, such as sustainable management of fishstocks and putting in place measures to avoid, remedy or mitigate the adverse effects of fishing, including effects on other species and their habitats. The Ministry has proposed that fisheries plans include:

- information on the current management of the fishery, as well as information on biological, social, economic and cultural aspects of the fishery,
- objectives that are clear and measurable,
- specification of regulatory measures and services to achieve the objectives,
- specification of who is responsible for delivery and implementation of the fisheries plan, which could include the Ministry, local Mäori and commercial or recreational fishing groups,
- contingency plans to address foreseeable variations in circumstances and known risks, and
- performance measures and monitoring and review systems [31].

The process for developing fisheries plans is expected to address some spatial conflicts from a fisheries management perspective, which may include use of voluntary agreements within and among fishing sectors.

5.2. MPA Policy and implementation plan

In early 2006 the Ministers of Fisheries and Conservation launched the MPA Policy and Implementation Plan (the MPA Policy). The MPA Policy is the first step in shifting the focus for establishing marine reserves from setting aside areas for scientific study to biodiversity protection [4]. This shift began with the development of the New Zealand Biodiversity Strategy, which fulfilled, in part, the international obligations set out in the CBD and established the Government's aim to have 10% of New Zealand waters in some form of protection by 2010 [32]. The MPA Policy outlines a nationally consistent basis for planning and establishing a network of MPAs. An MPA is defined as an area of the marine environment especially dedicated to, or achieving through adequate protection, the maintenance and/or recovery of biological diversity at the habitat and ecosystem level [4]. The MPA network will include marine reserves, as well as the use of regulatory measures available under the 1996 Act that provide for closed areas and restrictions or prohibitions on particular fishing methods, customary fishing areas and other legislative measures, so long as they provide sufficient protection for habitats and ecosystems.

It is conceivable that the MPA Policy planning process could lead to reconsideration of existing MPAs and establishment of new MPAs to achieve better biodiversity protection. The challenge to the MPA Policy planning process is in instilling a formalised structure for government agencies to facilitate consideration of the most appropriate spatial tool, or combination of tools, for an area, although the legislative processes for establishing these tools can occur without regard to the MPA Policy. Because the MPA Policy does not have legislative status, it cannot supersede existing rights recognised in legislation. For this reason, the MPA Policy cannot be used to make allocation decisions on the use of the marine environment. Provided users of the marine environment participate in the MPA planning process, they can assist with the identification of habitats and ecosystems that would have the least effect on their fishing activities and, therefore, be considered first for possible MPA designation. For this reason, the value in implementing the MPA Policy planning process is the likelihood that it will ameliorate future conflicts.

However, the value of the MPA Policy depends largely on the willingness of people to defer taking action on their right to apply for particular spatial tools until the planning process has occurred for a given area. As the race for the allocation of space intensifies, some will likely opt to propose their preferred spatial tool sooner rather than later, knowing the cumulative effects in a given area lessen the chance that subsequent proposals will succeed. For this reason, the MPA Policy planning process may well encounter exogenous shocks that disrupt the expected systematic consideration of the most appropriate spatial tools to be applied to under-represented habitats and ecosystems.

If implemented, the draft accord to prohibit bottom trawling and dredging would contribute greatly towards meeting the objectives of the MPA Policy, provided that

the protection standards are met. Although the draft accord proposes to close areas extending from sub-Antarctic to sub-tropical waters, the extent to which the areas cover under-represented habitats and ecosystems needs to be assessed.

5.3. New marine reserve legislation

Development of the New Zealand Biodiversity Strategy led to a review of the 1971 Act and drafting of a new Marine Reserves Bill. A primary purpose of the review was to align marine reserve legislation with implementation of the MPA Policy. Some of the provisions in the Bill include:

- amending the purpose of establishing marine reserves from setting aside areas for scientific study to protecting marine biodiversity,
- establishing marine reserves within the EEZ,
- expanding the criteria for assessing effects on user groups,
- providing explicit recognition of customary fishing rights and consideration of cultural traditions in the area,
- removing the provision under the 1971 Act that gives the Minister of Conservation discretion to allow for limited fishing, and
- removing the concurrence role for the Ministers of Fisheries and Transport.

The provisions in the Bill have attracted considerable debate among the fishing sectors. Some of the issues raised include:

- many Mäori and commercial fishers preferring the Bill retain the concurrence role of the Minister of Fisheries to better ensure their rights are upheld,
- Mäori wanting the Bill to be amended to provide for their input and participation, as opposed to the Bill's stated obligation to consult with them, and
- commercial fishers objecting to the Bill's emphasis solely on establishing marine reserves, preferring greater consideration be given to the regulatory measures available under the 1996 Act when developing the MPA network [33].

The Bill is currently before a parliamentary select committee. It is uncertain when the Bill will be enacted.

5.4. Oceans policy

Currently the various activities undertaken within New Zealand waters are managed under a wide range of legislation administered by numerous national and local government agencies. The management of these activities fails to address some operational issues, and is not well placed to manage opportunities and challenges for the future, particularly allocations between competing user groups. An overarching framework is needed to guide decisions on competing rights to utilise marine resources and to manage increasing demand for resource use [31,34].

The Government has agreed to develop an overarching management framework, referred to as the Oceans Policy, to ensure integrated and consistent sustainable management of New Zealand waters and to better ensure the greatest benefits are obtained from resource use. The Oceans Policy is intended to provide guidance on Crown regulatory and allocation decisions and the inevitable economic and social tradeoffs that must be made to resolve spatial conflicts and avoid the race for the allocation of space.

The Oceans Policy will likely include a combination of policy and legislative initiatives that subjugate inconsistent legislative obligations for oceans management and better align their disparate processes, while also upholding individual rights on resource use and managing the risks associated with inappropriate exercising of those rights. The challenge for the Oceans Policy is to address the inconsistencies in the bases for allocating fishing rights and obligations to protect the marine environment. Without the rights provided by ITQ holdings having a more defined spatial component, the conflicts caused by continued reduction in available commercial fishing grounds might not be fully resolved. Work is progressing on the Oceans Policy, and a draft discussion document is expected to be released in 2007.

5.5. Compensation

Maintaining a balance between competing rights to utilise fisheries resources and legislative obligations to protect the marine environment could be facilitated by provisions that allow compensation to be paid to affected parties. However, compensation is not a relevant consideration to Ministerial decisions on the establishment of marine reserves and customary fishing areas, despite some arguing the criteria for establishing them expropriate commercially valued fishing grounds without compensation. Section 308 of the 1996 Act provides a general presumption that the Crown will not be liable for compensation with respect to a wide range of regulatory measures [20]. Whether this presumption applies to the establishment of customary fishing areas is questionable. Those affected by establishment of either type of reserve can seek recourse through civil proceedings. To date, there have been no legal challenges to the establishment of a customary fishing area. The sole legal challenge regarding the effect that establishment of a marine reserve had on commercial fishers was dismissed [35,36].

6. Conclusion

Like other coastal nations, New Zealand uses a range of legislative obligations for utilising fisheries resources and protecting the marine environment, some of which are

inconsistent and result in spatial conflicts between competing rights. While ITQ holders often accept restrictions on their catch to ensure sustainable management of fishstocks, they generally view proposals to protect the marine environment or recognise customary fishing rights as an erosion of their rights when these proposals affect commercial activities. Similarly, recreational fishers typically object to any proposals that affect their perceived 'birthright' to fish. Mäori often express opposition to proposals that they consider interfere with customary fishing rights. At the same time, as society places greater expectations on protection of the marine environment, the Government places increasing emphasis on meeting this expectation when developing policies and legislation.

Currently, all competing fishing rights and legislative obligations to protect the marine environment cannot be simultaneously upheld to the extent possible and to the satisfaction of all parties. With hindsight, perhaps the recognition of particular fishing rights and protection of the marine environment could have been accomplished in ways that provided greater integration of competing rights and less social and economic upheaval in the recognition and exercise of those rights at different timeframes.

Development of fisheries plans and implementation of the MPA Policy are the Government's first steps in addressing the causes of spatial conflicts and the race for the allocation of space. The process of developing fisheries plans is expected to address some spatial conflicts. The MPA Policy planning process will help avoid future spatial conflicts by identifying as potential MPAs those habitats and ecosystems that have the least effect on users of the marine environment. However, the MPA Policy cannot change the basis and timing of Ministerial decision making on spatial tool proposals.

Resolution of spatial conflicts will likely require completion of the draft Oceans Policy, which to some extent will subjugate some legislative obligations so they work together to meet stated priorities. The Oceans Policy may not be required to protect 10% of New Zealand waters by 2010, particularly if the Minister approves the industry-proposed draft accord, though it may be needed to ensure full, comprehensive representivity of the MPA network by 2020.

The challenge for the Oceans Policy is to address fundamental inconsistencies in the bases for allocating fishing rights and obligations to protect the marine environment. This challenge includes increasing all sectors' awareness of each other's right to fish. The question remains, however, whether or not the proposed solutions will be sufficient to resolve the spatial conflicts and end the race for space.

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