FRUSTRATING SUSTAINABLE FISHERIES: THE QMS AND SUSTAINABLE FISHERIES AS AN IMAGINARY IN NEW ZEALAND

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ABSTRACT

This paper contends that stakeholders represent New Zealand fisheries through a sustainable fisheries imaginary. Stakeholders use the imaginary to legitimise sustainable utilisation. The imaginary is built using a series of calculative practices that constitute a measurement system (or metrology), that shape regimes of control. This imaginary is made manifest through three interrelated means: theory, rhetoric and practice. We contend that key stakeholders – specifically industry actors, ministerial policy makers and fisheries scientists – use the imaginary to promote, either deliberately or unwittingly, growth strategies that temper alternative interpretations of the state of New Zealand fisheries. We conclude that ongoing issues and recent events within New Zealand fisheries raise questions about the way this imaginary moulds understandings of sustainable fisheries to meet the expectations of those in control.

Keywords: New Zealand fisheries; fisheries imaginary; anti-political practice; metrology.

INTRODUCTION

Since the introduction of an individual transferable quota (ITQ) based quota management system (QMS) in 1986, rights-based solutions have been presented as the only way to address enduring problems facing New Zealand’s fisheries. QMS has proved to be a robust, transparent and practical system which has lead to the recovery of key inshore species such as Rock Lobster and Snapper and the formation of commercial stakeholder and indigenous organisations that are crucial to the successful management of fish stocks. New Zealand fisheries have figured high on the agenda in international management debates. The message conveyed by local and international commentators is that New Zealand is the “mecca of fisheries management” [1]. With this phrase as an entry point, we contend that New Zealand fisheries management is a ‘sustainable fisheries imaginary’. This imaginary is used by both local and international actors to perpetuate support for rights-based management systems. We maintain that this imaginary is an instrument of governance, formed by an amalgam of rhetoric, theory (or strategy) and calculative practice. The imaginary represents New Zealand’s marine management as environmentally and economically sustainable. We argue that the imaginary empowers only rights-based management systems and discounts ongoing challenges to fisheries management in New Zealand. We investigate this imaginary, and further develop concepts surrounding sustainable utilisation as governmentality [2,3].

We follow three lines of inquiry. First we consider the methods of governing which shape regimes of control. We argue that techniques and practices employed by institutions such as stock assessment, the setting of commercial catch and the creation of audited financial reports are crucial to understanding how sustainability is constructed in New Zealand fisheries. Second, we contend that key stakeholders, through an amalgam of rhetoric, theory and calculative practices, have created a metrology – a system of measurement – which underpins the ‘sustainable fisheries imaginary’. Finally, we maintain that this imaginary has, to use Barry’s [4] terms, anti-political outcomes, that constrain attempts at reassessing the state of New Zealand fisheries. We submit that this imaginary largely reflects the expectations of commercial stakeholders attempting to strengthen New Zealand fisheries in a globalised market. We consider the role of conferences, academic papers and popular literature in promoting rights-based management and the use of websites and certification to embolden a brand of sustainability. We
interpret stock assessment working groups as a technique for suppressing alternate constructions of sustainability and conclude that these techniques stultify wider understandings of sustainability.

**METHODODOLOGICAL APPROACH**

We write this paper principally from our research conducted in 2003-4. This research is based on a review of relevant literature and 87 semi structured interviews with a range of fisheries sector participants. This paper presents the preliminary observations of two ongoing doctoral dissertations concerned with two related, but autonomous, aspects of New Zealand fisheries; the institutional embeddedness of scientific knowledge and the social and geographic organisation of enterprise.

Initially this paper addresses key terms such as sustainable utilisation, governance, governmentality, imaginaries, metrology and political and anti-political effects, all of which are fundamental to an analysis of how institutions shape human environment relations. We use this terminology to explain how the marine ecosystem has been refashioned as a commodity to meet commercial expectations [5]. Following from this, the paper addresses in turn the three lines of inquiry identified in the introduction. We propose that dialogue on fisheries management demands a meaningful engagement with stakeholders who build alternative constructions of sustainable fisheries. Moreover these lines of enquiry highlight the limits and the inflexibility of the metrology which confirms the sustainable fisheries imaginary.

We use a relational approach to explain how the imaginary is formulated. Our approach challenges existing stakeholders to illustrate a reflexive awareness of their individual and collective actions. Our approach integrates the theory that underpins QMS and ITQ, the rhetoric which continues to support it and the practices of key actors which manifest its authority.

**SUSTAINABLE UTILISATION AS GOVERNMENTALITY**

The aim of this paper is not to reintroduce or describe the discourse associated with the Neo-Foucauldian lens of scientific inquiry2. In earlier work we discussed in detail how differing interpretations of sustainability are a root cause of much tension in New Zealand’s marine management debate. Tension has focussed on commercial stakeholders interpretation of sections 8 and 9 of the Fisheries Act 1996 and the implementation by those stakeholders of certain practices to meet these legal requirements. Previously, we argued that industry stakeholders have appropriated understandings of sustainable utilisation laid down in New Zealand fisheries legislation. We proposed that sustainable utilisation is a governmentality3. We hold that sustainable utilisation refers to a discourse focussed primarily on species specific management, the revenue derived from the extractive value of fisheries resources and a corporate auditing/benchmarking system which constructs efficiency around how much of a single stock is caught and the short term use of capital.

**BUILDING THE FISHERIES IMAGINARY THROUGH CALCULATIVE PRACTICE**

In this section we extend the discourse to describe the practices which have entrenched the ‘sustainable fisheries imaginary’[2,3]. We hold that calculative practice is a method for governing, and describe how stakeholders use calculation to legitimise their authority. We then introduce the metrology that surrounds stock assessment and fishing practice and outline the potential for calculative practices to have anti-political effects. We maintain these effects close down spaces of contestation, limit debate, and marginalise alternative interpretations of sustainable fisheries.

Governmentality analysis is concerned with the conduct of conduct and contends that “the space of government is always shaped and intersected by other discourses of science and changing moral rhetorics and ethical vocabularies” [6 p22]. We view sustainable fisheries as “a multiplicity of attempts to rationalise the nature, means, ends and limits for the exercise of power and styles of governing, and the instruments, techniques and practices to which they become linked” [6 p27]. We use this approach to
illustrate how the discursive practices associated with ‘sustainable fisheries’ stultify alternate understandings of sustainability and legitimise the status quo.

In the New Zealand context such studies are not without precedent [7, 8; 9]. Le Heron [10], examines the contemporary techniques of governing in New Zealand’s agri-food sector. Le Heron [10] implicates “a series of quantitative measurements [usually based on indicators], such as benchmarking, best practice and harmonisation, which through their technical work are also reforming the basis of economic process”. These calculative practices assess both quantitative and qualitative actions and relationships. The legitimising power of calculative practices such as audit procedures and contractual arrangements rests in the way their combination magnifies their effects. Strathern[11 p287] describes the persuasive power of calculative practice, suggesting “Like a ritual, audit tries to persuade participants of the way the world is without acknowledging its own particular perspective”. We make two observations concerning the label ‘ritual’. First, this label introduces a moral character into legitimate business practice. Consequently, legitimisation becomes synonymous with the use of calculative practice. Second, the label ‘ritual’ implies that utilising calculative practices can be interpreted as an act of faith, a confirmation of an unbending belief in the effectiveness of the practices and in the imaginary they legitimate. Contentiousness becomes an act of heresy, unacceptable and inappropriate not only to commercial interests in fisheries but also in wider society.

Power [12 p10] states that the extensive use of calculative practice is a defensive response to the need for institutions to deal with risk. Furthermore, “auditing threatens to become a cosmetic procedure which hides real risk and replaces it with the financial risk faced by the auditors themselves”. We contend that in fisheries, the ritualistic element to calculative practice obfuscates ecological risk and replaces it with financial risk. Moreover, the collection and presentation of data becomes more important than its interpretation and analysis [12]. Through calculative practice, knowledge is represented solely through a set of indicators assumed to accurately represent the complexity of the system they are used to describe.

The use of indicators and other standardised procedures of measurement form metrological regimes. The process of measuring and codifying relationships and actions transforms these actions into indicators. Indicators rely on “sets of numbers and facts about the natural or social world which have been abstracted from their specific conditions of production and reception.”. Thus “the production of information involves the manipulation of an object into more or less standardised forms in which its properties can be measured, recorded and made visible” [13 pp153-54]. Through calculation and metrology a fishery becomes simultaneously no particular fishery and any fishery. Metrological regimes can present sustainable fisheries as stemming from series of homogenised and standardised procedures, independent of local specificity. We contend that these procedures and the indicators they generate are crucial in producing New Zealand’s ‘sustainable fisheries imaginary’.

Metrological regimes create realities through measurement. By creating a reality the presumption is that the reality existed prior to the establishment of the metrology. Thus calculative practices have moral implications. An audience is expected to understand the reality made tangible through data interpretation and should be able to comprehend the implications of changing the measurement parameters. Again the metaphor of measurement as ritual is appropriate. Those that query the transformative manipulation of data into a tangible and objective reality are dismissed as Philistines, ignorant of, or unable to grasp the essence of the metrological epiphany.

THE ANTI-POLITICAL EFFECTS OF METROLOGICAL REGIMES

Barry [4] addresses the role of metrological regimes in socio-political debate. A binary exists where actions can have either political or anti-political effects. Actions which have political effects open up spaces for debate and contestation while those with anti-political effects suppress debate and limit confrontation [4]. We argue that the New Zealand’s fisheries imaginary has anti-political effects. Barry, like Power, highlights the inability of metrological regimes to address complex systems. Despite this weakness, however, Barry suggests that once initialised, metrological regimes develop an administrative inertia and are difficult to transform or disassemble [4,12].
Barry [4] identifies two further mechanisms which compound the anti-political effects of metrological regimes. First, contractual relations between the ‘measurers’ and those using the results of measurement to guide prospective action, give metrological regimes a market value. Research providers are solely responsible for data collection and may be unaware and certainly not responsible for actions stemming from the analysis of that information, despite having the knowledge to illustrate any weaknesses. Consequently those conducting the measurements have little say in how the information is used. Second, contractual relations promise research providers ongoing financial reward, as long as they refrain from questioning the assumptions of the metrology they are creating. In a competitive research environment such questioning may lead to the non-renewal of current research contracts and sway research contractors to look elsewhere for service.

THE ‘SUSTAINABLE FISHERIES IMAGINARY’: IMPLICATIONS FOR MANAGEMENT.

The notion of imaginary as we use it is metaphorical, intended to invoke ideas that the fishery is constructed by human action and imagination. Our position pays specific attention to the role of ‘discourse’ in human environment relations. Castoriadis [14 p127] echoes such sentiment, positing that an imaginary “ultimately stems from the ongoing positioning or presenting oneself with things and relations which do not exist, in the form of representations”. Furthermore, an imaginary represents an “emergent set of ideas and practices forged in the crucible of culture and politics” [15 p245]. The mere presence of an imaginary means little: the ways in which it is appropriated are more significant. An understanding of what constitutes sustainable fisheries in New Zealand is dynamic. We contend that currently the potential for re-imagining the sustainable management of fisheries has been stultified, weighed down by a metrological regime fabricated in order to reinforce a version of sustainability acceptable only to those stakeholders involved in its assembly.

FORGING SUSTAINABILITY? NEW ZEALAND’S QUOTA MANAGEMENT SYSTEM

Most sources acknowledge that by the 1970s, New Zealand’s inshore finfish and shellfish stocks were becoming depleted while offshore fisheries were dominated by foreign interests [16, 17]. Re-regulation involved replacing input-based controls with a rights-based quota management system. The QMS served both a practical and an ideological purpose. A goal of the QMS and ITQ was to create a property right that could be held by individuals and groups and sold or leased in the market place. Consequently the QMS resulted in a simultaneous privatisation and marketisation of fish stocks. This new form of property was supposed to lead to more efficiency and sustainability as users strived to preserve their financial interests [18].

MARINE RESOURCE ECONOMICS: THEORISING SUSTAINABLE FISHERIES

A developing body of theory that informs rhetoric and practice lies at the core of the fisheries imaginary. Fisheries managers and marine resource economists have focused on property rights specifically to harness natural market-oriented behaviour uniting privatisation and marketisation under a distinctive form of neo-liberal governance [19]. This intellectual history starts at the point in the 1950s when neo-classical economic analysis entered into fisheries [20, 21]. Within this discourse, economic efficiency is the key to social and environmental welfare. Typically, common property was portrayed as a market failure. Without clearly defined property rights, rational individual behaviour leads to universal economic and biological ruin. Over time, in a number of discourses, property rights have been tied to different logics and goals. Despite this, when property rights are tied to solving “the tragedy of open access” they solely concern market-based resource regulation (emphasis added [19]).

The international shift towards extended jurisdiction of the 1970s-80s witnessed the enclosing of the oceans into national territory. Enclosure was a first step towards developing property rights for individuals and much of the fishery management effort went into expanding domestic fishing capacity.
leading to overcapitalisation [22, 17; 19]. This expansion of effort resulted in many economists re-evaluating fisheries. The 200 mile Exclusive Economic Zone (EEZ) was viewed through a lens of several decades of economic theory on the tragedy of the commons and private property rights. Economists used extended jurisdiction as an object lesson in how open access to common property leads to inefficiency and degradation. Economists writing on rights-based fishing have argued that:

The provision of a guaranteed share of available catch is seen by many as the key to alleviating overcapitalisation and its attendant problems, such as the race for fish and pressure for unsustainable catches [23]

And

There has now emerged a fair consensus among fishery economists that this [ITQ] management system offers the most promising general approach to managing ocean fisheries [24].

And finally Scott [25], a doyen of fisheries economics, concluded: “I have become convinced that quotas are what most fisheries should have”.

Hersoug [1] observed that too often New Zealanders have been too busy doing the business of fishing to comment on fishing practice or reflect on fishing histories. However, a number of authors have discussed the success of New Zealand’s QMS and ITQ regime. These authors have continued to write within a framework that rests upon the assumptions of neo-classical economics and a neo-liberal ideological position. By publishing often insightful work in a wide range of journals, they have helped perpetuate New Zealand’s sustainable fisheries imaginary. At times these authors have had a vested interest in maintaining the status quo. Harte [26] for example, published a key article concerned with the commercial and management benefits of industry led research. However it would be surprising to expect less than that from the then-general manager (policy and science) of New Zealand’s seafood industry council – an industry funded organisation. Harte [26 p159] argues that “It [QMS] is inclusive of all interests including commercial, recreational and indigenous Maori fishers, and environmental non-governmental organisations.” Harte fails to identify an obvious reason for industry to be involved in research. Commercial operators can control what gets studied, where and by whom. Harte implies throughout the article that industry should lead scientific research on sustainable fisheries. However, research on sustainable fishing is expensive and asks complex questions which entail long term research projects that may not reflect the short term goals and accumulation ethic of commercial stakeholders. Such projects have no guarantee of direct profits to industry – the driving force of commercially oriented fisheries management.

More measured responses have included the work of Annala [27] (Chief Scientist at the Ministry of Fisheries), and Peacey [28]. Annala [27] notes that when it comes to the performance of the QMS, the literature is long on perceptions and short on hard data. Overall he believes that the QMS has been a success although not without some specific problems. Peacey, writing on the catch balancing regime acknowledges that the QMS faces a number of challenges, not least that the Total Allowable Catch and Total Allowable Commercial Catch setting process must be able to respond quickly to new information so that catch limits can reflect the actual state of each fish stock.

THE RHETORIC IMPLICIT TO THE QUOTA MANAGEMENT SYSTEM

We maintain that in New Zealand fisheries rhetoric has at least two elements. First, rhetoric includes the power of various stakeholders to define the boundaries of fisheries discourse and the form of discursive practices. Second, rhetoric has a performative aspect which includes the writing and language designed to persuade and impress; the advertorial slogans and phraseology which promote the sustainable
fisheries imaginary. We contend that the combination of theory with these two aspects of rhetoric, discursive practice and performance, foster an environment where the actions of commercial stakeholders dominate and become self-legitimising. Furthermore, as these practices materialise they subsequently inform both the theory and the rhetoric that protect the imaginary. An iterative feedback process emerges, which further marginalises alternative views of fisheries.

THE DISCURSIVE ELEMENT

Rhetoric is tightly bound up with the theory that imbues fisheries management. The boundaries between the two often blur. We hold that some commentaries and theoretical analyses of fisheries appearing in both academic and popular literature contain elements of rhetoric, some implicit [24]many more quite explicit [29, 30,31,25]. This body of literature is indicative of the self-justifying tendency of the fisheries imaginary. Hersoug [1 p1] alludes to the fervour of rights-based zealots in the foreword of “Unfinished business, New Zealand’s experience with rights based fisheries management”:

“And for the last 15 years the New Zealand example has figured high on the agenda, together with Iceland... more interest was attached to New Zealand, it being sufficiently far away so that few could check the detail! The message, conveyed by local as international “missionaries” was simple: Convert to ITQs and get the incentives right and you have a near perfect management system!”

Even the title of this work – “Unfinished Business” – alludes to the hegemony of the commercial experience of fisheries management in New Zealand, and such “unfinished business” is an outcome of the privatisation and marketisation of the resource.

THE PERFORMATIVE ELEMENT

The ‘performative’ element of rhetoric stems from academic sources, industry publications and the popular media. We contend that a key function of this literature is to broadcast the supposed successes of the New Zealand QMS in order to suppress curiosity concerning contentious issues. [32 p18] states “New Zealand is now held up as the best example of sustainable management”. Yet sales for Sanford (New Zealand’s only publicly listed seafood company) fell 20 percent in the last financial year, leading to the closure of a South Island processing plant. Despite these reversals, Sanford’s managing director, Eric Barratt, maintains that “New Zealand is doing the best in the world at managing its resource” [32 p19]. Such statements reinforce the sustainable fisheries imaginary. The implication is that because Barratt is a successful businessman, his opinions regarding the sustainability of marine ecosystems and fisheries management more generally are the only valid interpretations regardless of financial returns to the contrary. We feel that evidence qualifying Barratt’s statement is contentious and that such statements reflect solely a commercial stakeholders interpretation of what ‘best’ represents.

Rhetoric also acts as a mechanism for the mass motivation of the wider public [33]. Any opposition to the fishing industry or the status quo is constructed as heretical. For example, when environmental protestors demonstrated outside the Orange Roughy Management Company in Nelson, (the South Island’s largest fishing port) George Clement, the chief executive of the company spoke on national radio to label the protestors position as “green-lies” [34]. Clement also implied that the actions of environmental NGOs are part of an international environmental agenda. Such a declarative statement makes any contrary position untenable. Furthermore, Clement understated the negative impacts of deep sea trawling and implored New Zealanders to get behind the fishing industry and make it somehow more sustainable.

“Most of the sea-bottom we fish over flat areas, just sand and mud so if your concerned with a few little marks and a bit of mud at a1000 metres of depth then you can call that
damage – we wouldn’t. Ah there are some areas where there is some benthic life which does get affected by trawls, but it’s a very small part of what we do.”

And later…

“We think all New Zealanders should feel proud of the fishing industry. It’s a wonderful dynamic industry … it’s probably the greenest and most sustainable of our natural resource industries in New Zealand. And we should all be supporting it and saying let’s get on and make it even better”.

Clement’s statements reflect our contention that much of New Zealand’s fisheries management rhetoric has a tone that suggests commercial stakeholders should *obviously* manage the resource as they see fit. These stakeholders use rhetoric to advocate that they are better informed than any others regarding the sustainability of marine ecosystems. Moreover, such a position implies degrees of sustainability practice rather than a dualism of sustainable or unsustainable practice.

Peter Talley [16], a director of Talley’s Fisheries, one of New Zealand’s largest fishing and frozen goods companies, is critical of scientists’ views such as those expressed by Turner et al [35]. Turner et al assert that uncertainty stemming from a lack of understanding regarding the marine environment should result in cautious management decisions which minimise the impact of commercial fishing on the marine environment. Talley [16 p252] holds that much marine research is unnecessary and that marine management should be focussed on providing “a lot more economic advice and a lot less biological opinion”.

Talley’s dismissive tone was echoed in the comments of Bruce Young at the 2003 Seafood Industry conference in Auckland, New Zealand. Young, at that time CEO of Moana Pacific Fisheries, observed when addressing the issue of seabird by-catch: “The primary reason for not catching a bird is it takes up a hook” [36]. Young’s response hardly reflects the ideals of Southern Seabird Solutions, an alliance of New Zealand and international interest groups, including fishers and fishing industry representatives of which Moana Pacific is one. Young’s comments reveals Moana Pacific’s participation in the Southern Seabird Solution project as strictly pecuniary. We consider that Young’s comments undermine the credibility of those made by Brent Marshall in the Southern Seabirds Solutions advertorial publication handed out at the conference to indicate just how progressive the New Zealand industry has become in terms of ecosystems management. Marshall, at that time a Moana Pacific employee, states that preventing seabird by-catch “is an issue that deserves the full attention of those who can contribute and solve the unintentional capture of seabirds” [37]. The statements issued by both Talley and Young do little to engage with a broad understanding of sustainable fisheries and the impacts of fishing. Furthermore, these comments endorse the status quo and are indicative of the hegemony of commercial stakeholders in the management process.

**FROM WELCOMES TO WEBSITES: BLENDING THEORY, RHETORIC AND PRACTICE**

Peter Pearse’s keynote address to the International Institute of Fisheries Economics and Trade Conference (IIFET 2002) provides a platform from which to investigate the amalgam of theory, rhetoric and practice that entrenches the sustainable fisheries imaginary. Pearce presented ITQ systems as a fisheries management panacea and New Zealand as a fisheries management utopia. He asserted that ITQ regimes are much more than a ‘passing fad’ and that ITQ systems *always* precipitate greater financial returns from the fishery (our emphasis). Pearce attacked opponents of the ITQ system, arguing that their disputes stem solely from “a lack of appreciation of transferability and exclusivity in business” [38]. Pearse’s keynote opening address was indicative of the level of academic and commercial consensus regarding the value of ITQ systems. We contend that Pearse’s speech and the theme of IIFET 2002 – ‘*Fisheries in the global economy*’ – represented a significant governmental moment with associated anti-
political effects. This address combined with the conference theme challenged those who question the authority of rights-based management systems and simultaneously dismissed their argument. During the conference itself, this challenge was reissued many times. We felt that the fixed position of many conference attendees undermined those that proposed alternative constructions of the fishery [39], and the theories that underpin these alternatives [40]. Pearce’s performance is also an example of the wider slogans designed to exhort and motivate others involved in fisheries academia and fisheries management and contributed to further embedding the sustainable fisheries imaginary.

Similarly to Pearse, commercial stakeholders use the rhetoric implicit within the sustainable fisheries imaginary as a marketing tool for a more diverse audience. The success rhetoric of the sustainable fisheries imaginary is packaged into web pages, signage and annual reports. For instance Moana Pacific describes New Zealand as

“Famous for the beauty of its land and pristine waters. Its cool environment and dramatic unspoiled coastline provides a fishery haven abundant with high quality seafood. New Zealanders' value their environment and lead the world in many areas of environmental conservation including fisheries management. Access to New Zealand's fishing resources is protected by a 1986 Act of Parliament. The sophisticated Quota Management System controls the harvesting of the natural fish resources to sustain the resources for future generations of New Zealanders. This long term care of our fisheries also guarantees the sharing of this quality with the world” [41].

Similarly, Sealord describes New Zealand as:

“the country that has led the world in careful and sustainable management of fish harvesting through the Quota Management System. The New Zealand Hoki fishery was the world's first major white-fish fishery to be certified as sustainable by the London-based Marine Stewardship Council. This is a tribute to the success of the Quota Management System” [42].

Such rhetoric illustrates how it is in a firms’ best interests to defend how sustainability is constructed. The imaginary provides a reason for continued cycles of reinvestment in the practices of fisheries science and exploratory fishing and in making markets. Furthermore, such promotion is a mass motivation that shapes wider consumer perceptions of the fishery and the commensurate purchasing behaviour. New Zealand’s sustainable fisheries imaginary becomes a strategy for firm growth and can be seen in the adoption of Marine Stewardship Council (MSC) certification.

The MSC is an international organisation that was established in 1997 by Unilever and WWF to harness market forces as an incentive to improve the management of fisheries [43: 1] MSC certification is a mechanism for shaping wider consumer perceptions of fishing and associated buying behaviour. Certification allows a premium to be realised in the contested European market through eco-labelling. Through extensive consultation with fishery stakeholders the MSC established a standard describing a well managed and sustainable fishery. The New Zealand Hoki fishery is one such fishery. Under these terms the Hoki fishery has been economically and environmentally sustainable since 2001. However, declines in catch entitlements over the last three years and ongoing complaints by environmental NGOs call that sustainability into question: Weeber states that “when the hoki fishery was first certified in 2001 the annual allowable commercial catch was 250,000 tonnes, which was reduced the following year to 220,000 tonnes. Last year the industry could only catch 150,000 tonnes, despite having an allowable catch limit of 180,000 tonnes. This year’s catch is likely to be set around 100,000 tonnes, which will represent a 60% reduction in just 4 years” [44]. Richard Cade (CEO of the Hoki Management Company) countered Weeber’s threat to the imaginary by using evidence derived from a MSC audit of the Hoki fishery, to suggest that while practices needed improving, certification was not under threat [45]. Certification may
not be threatened, yet the decline in catch entitlement and the ongoing dilemma of seabird and marine mammal by-catch facing the fishery raise questions as to the environmental efficacy of certification.

STRATEGY AND TACTICS: THE PRACTICES WHICH DEFEND THE SUSTAINABLE FISHERIES IMAGINARY

Stock assessment working group meetings play a crucial role in New Zealand’s QMS. Also vital are the plenary meetings which discuss the results of working group sessions. We contend that these meetings are important techniques for reinforcing the sustainable fisheries imaginary. The annual quota setting process is pivotal for not only ensuring the sustainability of various fish stocks, but also in determining what sustainability means and represents. Working group meetings are ostensibly a transparent process, open to all interested stakeholders. In these meetings, debate is limited to a discussion amongst research scientists concerned with the appropriateness and objectivity of other scientists’ research methodology. Consequently, stakeholders unfamiliar with the statistical nuances of fisheries science are prevented from entering into meaningful dialogue with researchers. As one ministry informant observed. “Once environmental NGOs stop attending working group meetings we feel as if the process is working”. The subtext of this response is that non-attendance is analogous with sustainable management.

Within stock assessment working group meetings stakeholders must use specific data to buttress their arguments. Debate centres on the techniques used, the assumptions made and the levels of accuracy in these data sets. It is rare for debate to consider how representative these data are as an indicator of the health of a specific fish stock. [46 p9] suggest that “consistent and recurring exposure to specific representations of phenomena limit the ability of individuals to question the accuracy of such representations”. As does Barnes, we argue an element of ritual exists within the working group meeting process. Within these meetings, the tangible effects of the management guidelines produced are not considered until they have been transformed into an appropriate set of statistical results.

The specificity of scientific data and the lexicon of fisheries science (terms such as MSY, TACC, \( B_0 \)) reclassify the environment as a manageable subject, reduce its inherent complexity and remove it from a specific geographic context. Measurements of the state of individual fish stocks do not reflect the complexity of real populations of fish prior to the measurement process or explain the interaction between fish populations and the wider marine environment. Despite this, however, the measurement process is responsible for creating and sustaining a management regime which does have real effects on fish stocks, the rest of the marine environment and the wider economic community that depends on it.

We maintain that the metrology that stems from the stock assessment working group meetings has anti-political effects. Considerable expertise is involved in setting up and maintaining the fisheries imaginary. The scientists and managers have their livelihoods and their reputations at stake. Stakeholders who contest this metrology are not only contesting the objectivity of the measurement process itself but also implicitly those responsible for its creation and the legitimacy of the expertise involved. Pickett et al imply that the political effects of science are crucial to its development [47]. Nonetheless, the anti-political effects of the metrology informing fisheries management in New Zealand creates an authoritarian system of understanding and prevents insights into the dialogue between conceptual constructs and observable phenomena. The anti-political effects of the quota setting process close down negotiable space in New Zealand fisheries management and preserve the fisheries imaginary.

CONCLUSION: NEW ZEALAND, A FISHERIES MANAGEMENT MECCA?

New Zealand’s QMS has been presented as the world’s most sustainable commercial fisheries management regime and the application of ITQ has been lauded as a triumph of economic efficiency. We have questioned the appropriateness of these labels and sought to show that the QMS and ITQ have enabled commercial stakeholders to control the understanding of sustainability in New Zealand fisheries management. Commercial stakeholders exercise their hegemony by supporting a ‘sustainable fisheries imaginary’ made tangible through an amalgam of three key elements:
Theory – rights based management is discussed in a plethora of academic and popular texts, yet discussion is often limited to commentary or case studies rather than analysis.

Rhetoric – both its discursive and performative elements.

Practices – of research scientists and commercial fishing companies.

The imaginary commodifies fish and reshapes the social and natural relations surrounding fishing. This imaginary is held in place by a management metrology, made manifest through scientific research and calculative practice, which we argue are methods for governing. We liken the QMS’s dependence on this metrology to an act of faith, and compare the promotion of New Zealand’s management successes to a religious ritual. We argue that this ritual promotes a specific abstraction of reality and marginalises alternative interpretations of sustainable fisheries management.

The sustainable fisheries imaginary is a complex system of meaning that shapes institutions, practices and identities involved in New Zealand’s marine management. We contend that the imaginary as a deliberate construction provides commercial stakeholders with a platform for continued economic growth. Through its specific discourse the imaginary is self-legitimising. It has eclipsed alternative marine tenures and alternative views of the environment not driven by scientific research, marketisation and the discourse of contractual expertise. The imaginary is driven by a globalisation of markets, technology and regulations that replace often deeply entrenched customary rights which pre-date QMS and ITQ. Significantly, we believe that the continued perpetuation of the sustainable fisheries imaginary and the further development of its guiding metrology are essential for continued capitalist development. The sustainable fisheries imaginary creates a sustainable future within its own terms, while the anti-political effects of the metrology marginalise alternate analyses. We propose that a meaningful engagement with these alternate analyses is crucial to fisheries management in the long term. Sustainability is a human construction and as such is a dynamic concept. We consider that the sustainability discourse deserves to have political rather than anti-political effects. If sustainability is to undergo further conceptual evolution, a space for dialogue is necessary.

ENDNOTES

1. This paper stems from a conversation held in a ‘Belgianstyle’ bar during the last IIFET conference in Wellington New Zealand in 2002. A fellow conference attendee was waxing lyrical concerning how unusual and uplifting it was drinking ‘Belgian’ beer shipped all the way from Belgium in a Wellington bar. The beer in fact brewed in Auckland under licence and is most likely only shipped from Auckland to Wellington The ‘Belgian’ bar in question represented what has been termed in the social science literature as ‘an imaginary’.

2. Accounts of this discourse are widely available see particularly Rose (1999).


4. For more information on ecological risk see [47].

5. This paper makes no attempt to trace the regulatory and economic history of fishing in New Zealand. Several comprehensive reviews exist see [1, 48].

6. Significantly, the QMS was also a part of a wider comprehensive restructuring of relationships within the New Zealand state, economy and civil society, with a commensurate marketisation/privatisation invoking a redefinition of the role of the state away from the distribution and allocation of resources.

7. See [48] for a comprehensive bibliography.

8. This is particularly important when considering the number of conference attendees from developing nations and the economic potential of harvesting stocks located in these countries.
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