

IS THE NEW ZEALAND EEZ REGULATORY FRAMEWORK INTERNATIONAL BEST PRACTICE?

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I. INTRODUCTION

New Zealand is fortunate to have a very large and diverse marine area. It supports a wide array of marine life with high biodiversity in seabirds, marine mammals and invertebrates. It contains significant petroleum and mineral resources. It also supports a substantial fishing industry. Our seas include the territorial sea (virtually the same as the coastal marine area) out to the 12 nautical mile limit, the exclusive economic zone or EEZ, and the extended continental shelf that extends some distance beyond the 200 nautical mile limit of the EEZ in some places. How the EEZ and the other seas under New Zealand’s control are managed is of critical national and international importance.

At the 2011 EDS Conference Raewyn Peart presented on “Oceans governance framework: An appraisal”. She concluded that New Zealand’s EEZ management was lagging behind international best practice because New Zealand had no mechanism for integration; no provision for marine spatial planning in the EEZ; no agency responsible for oceans management; no EEZ environmental assessment legislation; no EEZ marine protected areas legislation; and old and poorly performing marine mammal and wildlife (seabird) legislation.¹ One of the authors of this paper also spoke at the 2011 EDS Conference, and identified a number of shortcomings in the law to regulate offshore petroleum activity, especially in regard to well integrity which is the ‘fence at the top of the cliff’.²

A lot has happened since 2011. This paper appraises the present state of our offshore environmental legislation, focussing on three issues that are at the fore: the lack of strategic or spatial planning, especially for marine protection purposes; the shortcomings in regulation of petroleum well integrity; and the challenges we face in achieving integrated management. The paper concludes that New Zealand has a lot of work to do by international standards, although it must also be acknowledged that other jurisdictions also struggle to address these issues. Although this paper focuses on the EEZ it also comments on the management of land and the territorial sea.

(a) Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012

The big announcement that the Minister for the Environment made at the 2011 Conference has now taken shape as the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012. It was a substantial achievement; even though there was general agreement that new law was needed, it was a project that had been tried and failed before. The Act was improved during the

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¹ http://www.edsconference.com/content/docs/2011_presentations/Peart%2C%20Raewyn%20ppt.pdf

² B Barton “Offshore Petroleum and Minerals: Plugging Gaps in the Present Framework” EDS Conference “Coastlines: Spatial Planning for Land and Sea” Auckland, 1-2 June 2011, revised as “Offshore Petroleum and Minerals” [2011] NZLJ 211.

legislative process, in particular with the inclusion of a statutory purpose that aligns with that of the Resource Management Act 1991.

The Act was considered by the courts very soon after coming into force. The transitional provisions allowed a company with a Crown Minerals Act exploration permit to go ahead with exploration without obtained a marine consent provided the company prepared an environmental impact assessment and submitted it to the EPA. Anadarko NZ Taranaki Co was in this position. It omitted from the EIA some of the information that it had supplied to Maritime New Zealand in a discharge management plan concerning the effects of oil spills. Greenpeace sought judicial review of the EPA's decision to accept the EIA as complete. Greenpeace failed; the Court held that the EPA's duty was merely to receive the EIA, not to approve it. The comments of EPA staff about the relative roles of the EPA and Maritime New Zealand did not expose any error of law, but exposed a question about regulatory integration that is a persistent one.³

The EEZ Act was also in the news for an amendment to create a class of activities that require marine consents but without notification or a public hearing.⁴ Regulations have since put activities involved with exploration drilling for petroleum into this category.⁵ This is unfortunate because exploration is not less risky than production, and in oil and gas exploration can lead to production reasonably rapidly. When the regulations were developed it was argued that an exploration well may only take weeks to drill. Although this is true, drilling is typically the result of a long process of exploration planning and decision-making that can readily accommodate the time needed for notification and a public hearing.

The first marine consent application, for the mining of iron sands in the South Taranaki Bight, has shown that a Decision-Making Committee⁶ may decline an application that left too many doubts about the its possible environmental effects.⁷ What is perhaps most interesting about this decision is that the provisions in the EEZ Act providing for adaptive management failed to get the application over the line. The Act identifies a number of matters that the EPA must consider when deciding on an application for a marine consent. One of them is that if the information available is uncertain or inadequate, the EPA must favour caution and environmental protection; but first it must consider whether taking an adaptive management approach would allow the activity to be undertaken.⁸ The Committee considered the Supreme Court's decision in *Sustain Our Sounds v NZ King Salmon*⁹ which addressed adaptive management. It concluded that the necessary evidential foundation for adaptive management was not present in this case. There were too many uncertainties, and ultimately the application was premature.

In our view, the jury is still out on adaptive management (under both the RMA and EEZ Act). We are not aware of any New Zealand research which analyses whether the actual environmental effects of

³ *Greenpeace NZ Inc v Environmental Protection Authority* [2013] NZHC 3482

⁴ Section 29D Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012

⁵ Exclusive Economic Zone and Continental Shelf (Environmental Effects - Non-notified Activities) Regs 2014

⁶ A Decision-Making Committee is appointed by the Environmental Protection Authority to determine a marine consent application.

⁷ Environmental Protection Authority, *Trans-Tasman Resources Ltd Marine Consent Decision*, June 2014. The applicant has lodged an appeal.

⁸ Section 61 Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012

⁹ [2014] NZSC 40

an activity (managed through an adaptive management approach) align with the decision-makers expectations when it granted consent. Adaptive management requires continuing regulatory engagement. This is the opposite of one of the fundamental premises under the RMA and EEZ Act, finality of decisions on regulatory applications. Resource consent conditions under the RMA must not postpone or delegate the substantive decision and may only provide for certification as by a professional that a prescribed standard addressing a matter of detail has been met.¹⁰ It is likely that the Supreme Court's recent decision in *Sustain Our Sounds v NZ King Salmon*¹¹ will ensure more rigorous assessment of proposed adaptive management approaches at the front end.

(b) Other Marine and Coastal Laws

The Marine and Coastal Area (Takutai Moana) Act 2011 ended great controversy about Māori claims to the foreshore and seabed in the territorial sea. It is too early to say how readily claimant groups will be able to use the statutory procedures to obtain recognition of protected customary rights or customary marine title.

Also important in the territorial sea is the Supreme Court's decision in *Environmental Defence Society v NZ King Salmon*¹² which will ensure that greater care is taken in determining whether the New Zealand Coastal Policy Statement is properly given effect to in regional coastal plans under section 67 of the Resource Management Act 1991.

Amendments arising out of the Marine Legislation Bill¹³ made a number of changes to the law on marine pollution. Not all of them are in force yet. Powers over dumping (deliberate disposal of wastes or other matter) previously contained in the Maritime Transport Act 1994 are being transferred to the EEZ Act.¹⁴ Powers over discharges are also being transferred from the Maritime Transport Act 1994 to the EEZ Act in relation to mining (which includes petroleum) discharges.¹⁵ This will allow the EPA to undertake more integrated environmental regulation of offshore activities (other than shipping). Other amendments to the EEZ Act will ensure better compliance with the MARPOL Convention on pollution from ships and the London Convention and Protocol on dumping.¹⁶ Amendments to the Maritime Transport Act 1994 update New Zealand's implementation of international shipping conventions for civil liability, bunker oil civil liability, and intervention on the high seas to prevent oil pollution. The *Rena* shipwreck showed that there was a price to be paid for not updating the law in good time.

(c) Health and Safety

¹⁰ *Turner v Allison* [1971] NZLR 833 (CA)

¹¹ [2014] NZSC 40.

¹² [2014] NZSC 41.

¹³ Introduced in 2012. Divided by Committee of the whole House into divided bills in 2013.

¹⁴ Only dumping beyond the continental shelf stays under the Maritime Transport Act 1994/ Section 20D EEZ Act.

¹⁵ This includes discharges from offshore installations, pipelines, and ships engaged in mining activity.

¹⁶ The 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter (1972), and the International Convention for the Prevention of Pollution from Ships (1973) as modified by the Protocol of 1978. The amendments are being made by the Maritime Transport Amendment Act 2013 and the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Amendment Act 2013.

Another disaster, the Pike River Coal Mine explosion of 2010, galvanized government and business into rectifying some of the worst shortcomings of the health and safety legislation. The Health and Safety in Employment Act 1992 has been amended in relation to mining in terms that apparently intend to exclude petroleum.¹⁷ A new agency has been established under its own statute, the WorkSafe New Zealand Act 2013, independent of the Ministry of Business, Innovation and Employment. The grave under-resourcing and under-staffing of the regulatory organization seems to have been dealt with. Fully-fledged reform will be produced by the Health and Safety Reform Bill which is intended to produce a new Health and Safety at Work Act to replace the 1992 Act.¹⁸ The significance of the health and safety legislation lies in our reliance on it for the environmental safety of oil and gas wells, which will be covered later in this paper.

(d) Crown Minerals Act

In 2013 the Crown Minerals Act 1991 received its most substantial amendments since its enactment. The amendments incorporated the Government's decisions about access to publicly-owned lands (the Schedule 4 controversy) but otherwise made no major changes. The changes were in the detail of administration and relations between permit holders and the administering agency, New Zealand Petroleum and Minerals (NZPAM). The changes in respect of environmental protection were certainly not major, but they were a positive step in the direction of smoother integration of statutory regimes, as we shall discuss below. The amendments of 2013 add a section to the Continental Shelf Act 1964 to say that the Crown Minerals Act applies to non-petroleum mining on the continental shelf (ie the EEZ and the outer continental shelf).¹⁹ Before, such mining would have required a rather ad hoc approval under the Continental Shelf Act.

II. STRATEGIC AND SPATIAL PLANNING

(a) Consenting without Planning

The EEZ Act was developed to address gaps in the management of New Zealand's marine environment. The EEZ Act primarily manages the effects of activities that were not already regulated for their environmental effects under existing legislation (such as fishing and shipping).²⁰

The EEZ Act puts in place a framework for managing the environmental effects of activities in the EEZ through a consenting regime:

- Certain activities in the EEZ and continental shelf are restricted (section 20)

¹⁷ The Health and Safety in Employment Amendment Act 2013 was produced by the Pike River Implementation Bill, and added mining-specific sections. The definition of "minerals" could extend to petroleum even though the overall tenor of the amendment (and the principal Act in its definition of "petroleum operations") suggests otherwise.

¹⁸ The Bill was introduced on 10 March 2014 and is presently before the Transport and Industrial Relations Committee. The Bill in cl 9 makes it clear the intention to apply to the EEZ and the continental shelf. Again that is an improvement. The present Act probably applies to offshore installations due to Continental Shelf Act 1964 s 7(1) even though there has been no declaration under s 7(2).

¹⁹ Continental Shelf Act 1964 s 5AA.

²⁰ Some existing marine pollution protections have been transferred from the Maritime Transport Act 1994 to the EEZ Act.

- Regulations classify those activities as permitted, discretionary or prohibited (section 29)
- Discretionary activities are subject to a marine consenting process (sections 38 – 100)

The EEZ Act does not provide for marine planning. However, it does allow regulations to be developed which identify and provide for (including by closing) areas of the exclusive economic zone or the continental shelf that:²¹

- Are important or especially vulnerable because of the biophysical characteristics, or
- Are important for specific uses, or
- Must be managed in co-ordination with other marine management regimes, or
- Are, or are likely to be, the subject of competition or conflict arising from the incompatibility of different activities, or
- Are experiencing, or likely to experience, cumulative adverse environmental effects.

During the development of the EEZ Act many interested parties questioned why the Government was proposing new legislation instead of extending the RMA to apply beyond the territorial sea. During the first reading then Environment Minister Hon Dr Nick Smith stated that this *would have required an extensive planning regime that is out of proportion with the likely scale of activities out in the exclusive economic zone.*²² During the second reading Environment Minister Hon Amy Adams stated that it was *the Government's view that the complexity and planning framework of the Resource Management Act would be overkill in our relatively uncrowded offshore marine environment.*²³

(b) Spatial Competition Emerges: Phosphate and Fishing on the Chatham Rise

In 2007 the Government, in conjunction with the fishing industry, established benthic protection areas to protect marine biodiversity within un-fished areas of the EEZ from bottom trawling and dredging. The Fisheries (Benthic Protection Areas) Regulations 2007 established the Mid Chatham Rise Benthic Protection Area (along with 16 other BPAs).

In 2014 Chatham Rock Phosphate lodged a marine consent application to mine phosphorite nodules on the Chatham Rise. Approximately half of CRP's proposed marine consent area lies within the Mid-Chatham Rise Benthic Protection Area (see Figure 1 below). The overlap represents 60% of the Benthic Protection Area (5,236 km² of 8,732 km²).

²¹ Section 28 EEZ Act

²² (13 September 2011) 675 NZPD 21214

²³ [(30 May 2012) 680 NZPD 2733

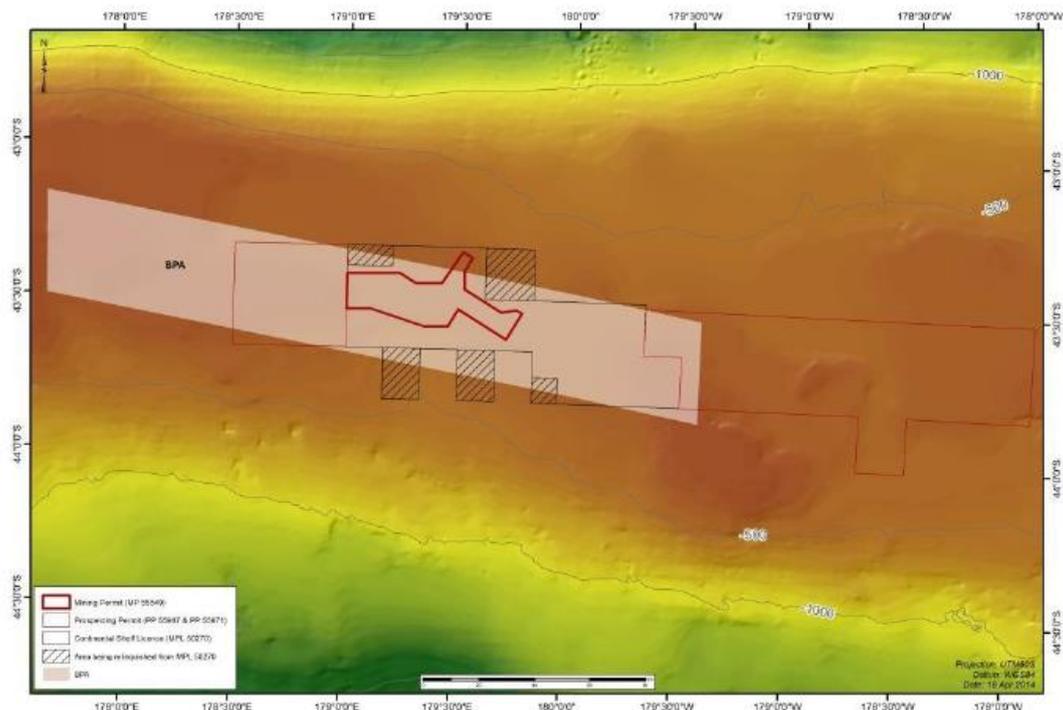


Figure 1: Mid-Chatham Rise BPA (shaded) and proposed marine consent area (outlined)²⁴

The Fisheries (Benthic Protection Areas) Regulations 2007 only control certain fishing activities. Chatham Rock Phosphate's environmental impact assessment states *these fishing related restrictions and prohibitions do not mean that mining cannot occur within the BPA*.²⁵ In response to this issue Chatham Rock Phosphate has carried out a 'marine spatial planning exercise' to identify 15 proposed mining exclusion areas (see Figure 2 below) within the proposed marine consent area. The proposed mining exclusion areas represent almost 18% of the proposed marine consent area (1822 km² of 10,192 km²).

²⁴ EIA, Figure 6

²⁵ Page 16

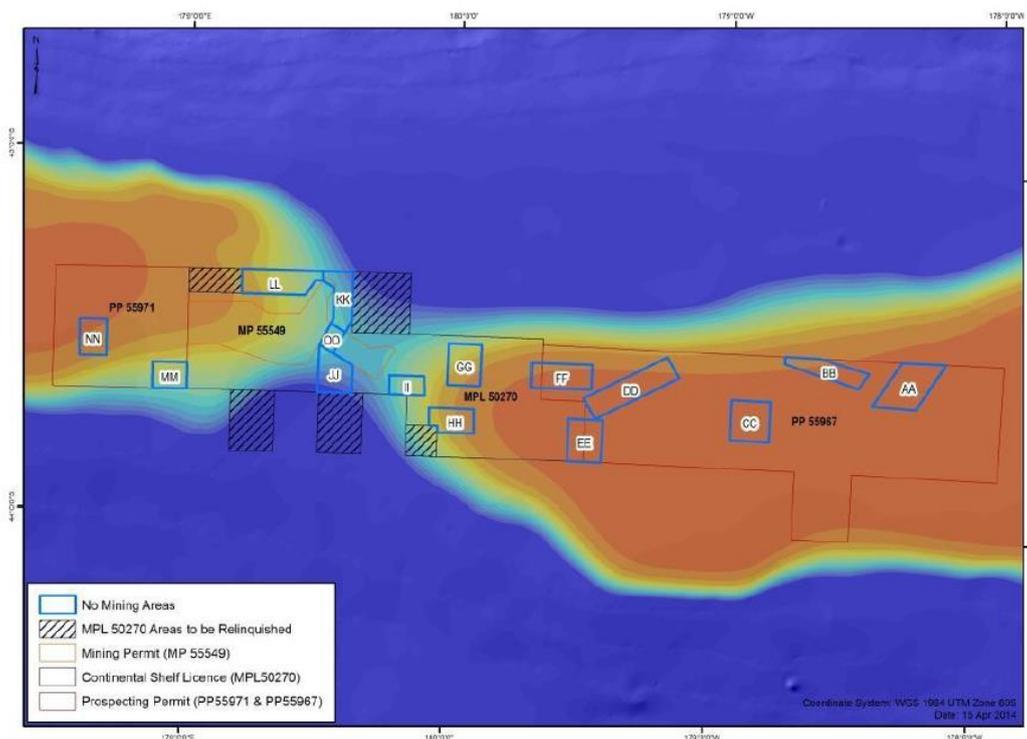


Figure 2: Proposed mining exclusion areas²⁶

There is no jurisdiction under the EEZ Act to control fishing²⁷ so it is unlikely that the EPA can exclude fishing activities from the proposed mining exclusion areas. Chatham Rock Phosphate have proposed a condition requiring it to “use best endeavours to establish a legal mechanism to protect the [mining exclusion areas] ... from future mining operations and any other activities that would disturb the seabed”.²⁸

Therefore, despite the Government’s view that *the complexity and planning framework of the Resource Management Act would be overkill in our relatively uncrowded offshore marine environment*,²⁹ it appears that just the second marine consent application raises issues of **spatial** conflict – between the environment, an existing activity, and a proposed activity. We wait to see how this will be addressed under the EEZ Act.

(c) Marine spatial planning

The above example may suggest that spatial planning would help provide a strategic framework for use and protection of the marine environment.

Marine spatial planning is an approach which focuses on the marine area as an integrated system and which, within this system, seeks to spatially identify the location of important values and resources and areas appropriate for different human activities. It involves taking a strategic and forward-looking approach to the management and use of marine space. It focuses on managing

²⁶ EIA, Figure 18

²⁷ Section 20(5)(a) EEZ Act

²⁸ Proposed condition 44(a))

²⁹ (30 May 2012) 680 NZPD 2733

conflicts between human activities and the marine environment (such as dredging and benthic habitats) as well as between competing marine uses (such as fishing and aquaculture).

(d) Spatial Planning for Minerals and Oil and Gas

The Parliamentary Commissioner for the Environment has recommended that central government and regional councils ensure that RMA plans identify areas (onshore) where oil and gas drilling can take place and where it cannot, as part of an effort to “watch where you drill.”³⁰ In particular, RMA plans should identify areas where aquifers and where seismicity present special risks. The Commissioner notes that those plans are lamentably slow in addressing oil and gas; in most existing plans the same rule governs water bores and oil and gas wells.

However, mineral and oil and gas exploration companies are not readily able to contribute to spatial planning by saying where they will operate next. No one can say with any assurance where exploration will focus next. Commodity prices change, the types of minerals that are targeted change, geological theories and models change, and so does engineering capability. It is not possible to say where the next oil or gas find will occur, or where the next viable mineral deposit will be discovered. It is called exploration for a reason. This puts considerable limits on spatial planning as a tool for resource management and environmental protection. It is a tool that can be used, for example to identify areas too sensitive to allow any mineral activity. But it is limited.

At this point note should be taken of a rudimentary form of spatial planning undertaken under the Crown Minerals Act – block offers. Block offers are the Petroleum Exploration Permit Rounds that are prescribed under the Minerals Programme for Petroleum as the entry point to deciding which areas of the sea or land will be opened up to petroleum exploration. Before deciding on a round, NZPAM may consult with industry, government departments, relevant Crown entities and local authorities.³¹ It *must* consult iwi and hapū. As matters stand it is entirely up to NZPAM whether to consult others, and whether to act on the results of consultation, and of course NZPAM is not tasked with environmental protection under its legislation. The purpose of the permit round process is to maximize exploration activity. But one could imagine progress if, in the absence of any more concrete form of marine planning, this mechanism was developed to produce genuine input from the Department of Conservation, the Environmental Protection Authority, and regional councils. It is striking that in the United Kingdom a permit round must be preceded by a Strategic Environmental Assessment.³²

(e) Marine spatial planning in New Zealand

Marine spatial planning is in its infancy in New Zealand. Sea Change is a marine spatial planning initiative for the Hauraki Gulf. It was commenced in a response to the environmental decline of the Hauraki Gulf and the difficulties of managing pressures due to the responsibilities for managing

³⁰ Parliamentary Commissioner for the Environment, *Drilling for Oil and Gas in New Zealand: Environmental Oversight and Regulation* (2014) pp 25 and 77.

³¹ *Petroleum Programme (Minerals Programme for Petroleum)* (2013) p 37, 7.3(2). Under the Crown Minerals Act 1991, minerals programmes set out how the Minister and NZPAM will exercise their statutory powers, and allocation decisions in particular must be made in accordance with the Programme. Permit rounds are not used for non-petroleum minerals, although efforts have been made to introduce similar methods.

³² *Offshore Oil and Gas in the UK: an Independent Review of the Regulatory Regime* (G Maitland, Chair, 2011), p 8. Available www.gov.uk.

different activities within the marine space being spread between different agencies. This process is stakeholder led with a Stakeholder Working Group taking primary responsibility for developing the Sea Change plan by September 2015. The Sea Change plan will be non-statutory, it will not have legally binding outcomes. Instead it will inform changes to unitary, district, regional and coastal plans and any other relevant policies, rules and regulations.³³

(f) Marine spatial planning internationally

One of the earliest applications of marine spatial planning was to assist with the management of marine protected areas. The first spatial plan for Australia's Great Barrier Reef Marine Park was developed in the early 1980s. It identified a number of marine zones where a different range of activities could take place. A similar approach was applied to the Florida Keys National Marine Sanctuary during the 1990s where a comprehensive management plan, including zoning, was developed.

During the early 2000s, Australia and Canada laid the foundations for applying marine spatial planning to large bioregions, which extended out to 200 nautical miles from the shore. While the original intention in both cases was to develop comprehensive zoning plans, this proved difficult in practice, and the main tangible output has been the identification of candidate areas for marine protection.

Marine spatial planning has more recently focused on the management of conflicts between competing marine activities, particularly in the heavily congested marine areas of Europe. Belgium has been progressively implementing a Master Plan for its portion of the North Sea since 2003, the Netherlands developed an overarching spatial planning framework for its North Sea area in 2005 (and revised it in 2009), and in 2008 Germany finalised a spatial plan for its exclusive economic zone.

These European planning processes were largely prompted by the need to better manage growing demands from new ocean uses, such as wind energy and aquaculture, as well as the need to implement European Union directives on nature conservation.

The United Kingdom Marine and Coastal Access Act 2009 provides a legal framework for spatial planning in that jurisdiction. This includes the development of a marine policy statement and a series of regional marine plans.³⁴

(g) The Marine and Coastal Access Act 2009 (United Kingdom)

The Marine and Coastal Access Act 2009 created a new framework for marine planning, marine licensing and marine conservation in the United Kingdom. It was enacted to address the lack of a coordinated regulatory scheme for the management of marine functions and activities.³⁵

³³ www.seachange.org.nz

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<http://www.aucklandcouncil.govt.nz/SiteCollectionDocuments/aboutcouncil/committees/haurakigulfforum/meetings/haurakigulfforumagitem15att20110411.pdf>

³⁵ Lowther and Rodwell, *IFCAs: stakeholder perceptions of roles and legal impact* (2013) Environmental Law Review 15(1) 11-26

Marine Policy Statement

The Act provides for the preparation of a marine policy statement to state general policies to achieve the sustainable development of the United Kingdom marine area.³⁶ The United Kingdom Marine Policy Statement was published on 18 March 2011.³⁷ It has been adopted by all four UK administrations.

The United Kingdom Marine Policy Statement is broad and general in nature. It sets out high level marine objectives (see figure 3) and discusses the ‘issues for consideration’ associated with key environmental effects and marine activities (see figure 4). It does not make ‘hard decisions’ about priorities and conflicts or set environmental bottom lines.

Figure 3 - High level marine objectives

Achieving a sustainable marine economy

- Infrastructure is in place to support and promote safe, profitable and efficient marine businesses.
- The marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future.
- Marine businesses are taking long-term strategic decisions and managing risks effectively. They are competitive and operating efficiently.
- Marine businesses are acting in a way which respects environmental limits and is socially responsible. This is rewarded in the marketplace.

Ensuring a strong, healthy and just society

- People appreciate the diversity of the marine environment, its seascapes, its natural and cultural heritage and its resources and act responsibly.
- The use of the marine environment is benefiting society as a whole, contributing to resilient and cohesive communities that can adapt to coastal erosion and flood risk, as well as contributing to physical and mental wellbeing.
- The coast, seas, oceans and their resources are safe to use.
- The marine environment plays an important role in mitigating climate change.
- There is equitable access for those who want to use and enjoy the coast, seas and their wide range of resources and assets and recognition that for some island and peripheral communities the sea plays a significant role in their community.
- Use of the marine environment will recognise, and integrate with, defence priorities, including the strengthening of international peace and stability and the defence of the UK and its interests.

Living within environmental limits

³⁶ Sections 44 and 45

³⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69322/pb3654-marine-policy-statement-110316.pdf

<ul style="list-style-type: none"> - Biodiversity is protected, conserved and where appropriate recovered and loss has been halted. - Healthy marine and coastal habitats occur across their natural range and are able to support strong, biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems. - Our oceans support viable populations of representative, rare, vulnerable, and valued species.
<p>Promoting good governance</p> <ul style="list-style-type: none"> - All those who have a stake in the marine environment have an input into associated decision-making. - Marine, land and water management mechanisms are responsive and work effectively together, for example through integrated coastal zone management and river basin management plans. - Marine management in the UK takes account of different management systems that are in place because of administrative, political or international boundaries - Marine businesses are subject to clear, timely, proportionate and, where appropriate, plan-led regulation. - The use of the marine environment is spatially planned where appropriate and based on an ecosystems approach which takes account of climate change and recognises the protection and management needs of marine cultural heritage according to its significance.
<p>Using sound science responsibly</p> <ul style="list-style-type: none"> - Our understanding of the marine environment continues to develop through new scientific and socio-economic research and data collection. - Sound evidence and monitoring underpins effective marine management and policy development. - The precautionary principle is applied consistently in accordance with the UK Government and Devolved Administrations' sustainable development policy.

Figure 4 - Key environmental effects and marine activities

Environmental effects	Marine activities
Marine ecology and biodiversity	Marine protected areas
Air quality	Defence and National Security
Noise	Energy production and infrastructure development
Ecological and chemical water quality and resources	Ports and shipping
Seascape	Marine aggregates
Historic environment	Marine dredging and disposal
Climate change adaptation and mitigation	Telecommunications cabling

Coastal change and flooding	Fisheries Aquaculture
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Marine Plans

The Act provides for the preparation of marine plans for eight marine planning regions covering the United Kingdom’s entire marine area, including inshore and offshore areas.³⁸ The Marine Management Organisation administers marine planning in England. In the other administrations marine planning will be undertaken by the Welsh Assembly Government, the Department of the Environment and Marine Scotland.

Marine plans are required to conform with the marine policy statement “unless relevant considerations indicate otherwise”.³⁹

In England, the Marine Management Organisation aims to have marine plans in place for all marine plan areas (see Figure 5) by 2022.⁴⁰ The East Inshore and East Offshore marine plans were published in April 2014. Preparation of the South Inshore and South Offshore marine plans is now underway.⁴¹

³⁸ English inshore and offshore, Scottish inshore and offshore, Welsh inshore and offshore, and Northern Ireland inshore and offshore. The inshore areas extend from mean high water springs to the edge of the territorial sea and the offshore areas cover the balance of the United Kingdom’s marine area. The separation reflects the differences in the way the two bodies of water are used. Although there is significant crossover, there are issues relating to land-based activities that apply to inshore activities: *How we did it – Securing approval for first marine plans* Planning 24 (11 June 2014)

³⁹ Marine and Coastal Access Act 2009 (UK), s 51(6).

⁴⁰ <https://www.gov.uk/government/policies/protecting-and-sustainably-using-the-marine-environment>

⁴¹ <https://www.gov.uk/government/policies/protecting-and-sustainably-using-the-marine-environment>

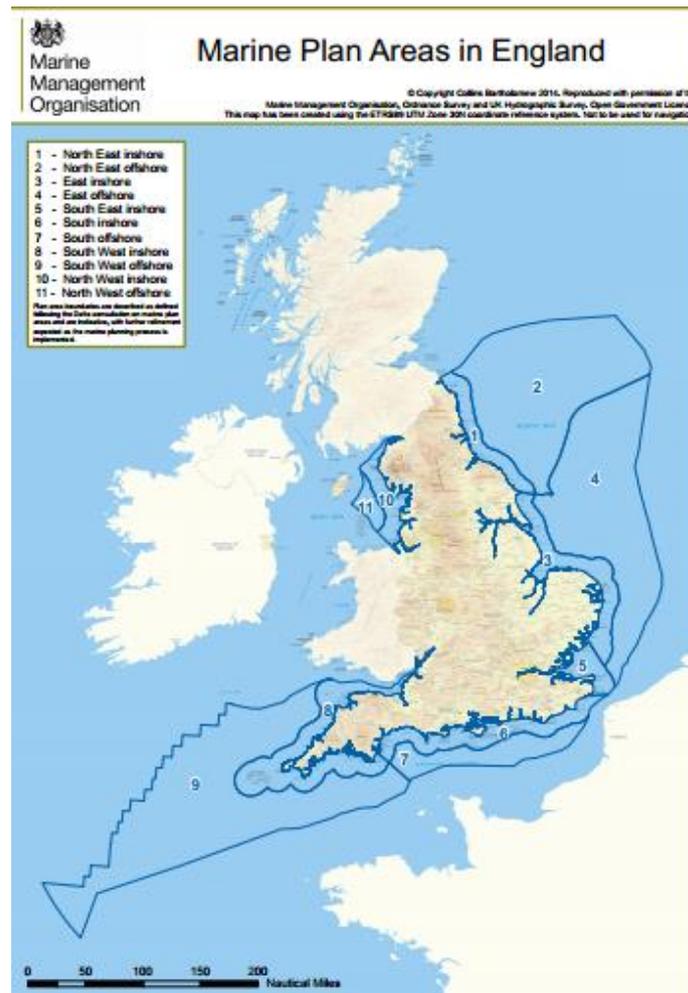


Figure 5 – Marine Plan Areas in England

When making any authorisation or enforcement decision, public authorities must make their decisions “in accordance with” marine planning documents unless “relevant considerations indicate otherwise”.⁴² In relation to other decisions, public authorities must ‘have regard to’ the appropriate marine policy documents.⁴³

Public authorities are therefore not compelled to comply with marine planning.⁴⁴ This is comparable to the Resource Management Act which only requires consent authorities to “have regard to” planning documents⁴⁵ and the EEZ Act which only requires the EPA to “take into account” relevant matters.⁴⁶

The East Inshore and East Offshore marine plans were published in April 2014. The plans (which are combined into one document) set out an overall vision, 11 objectives and 38 policies. The vision for the East Inshore and East Offshore marine plan areas is:

⁴² Section 58(1)

⁴³ Section 58(3)

⁴⁴ Appleby and Jones *The marine and coastal access act – A hornets’ nest?* Marine Policy 36 (2012) 73-77

⁴⁵ Section 104 Resource Management Act 1991

⁴⁶ Sectio 59(2) EEZ Act

By 2034, sustainable, effective and efficient use of the East Inshore and East Offshore Marine Plan Areas has been achieved, leading to economic development while protecting and enhancing the marine and coastal environment, offering local communities new jobs, improved health and well-being. As a result of an integrated approach that respects other sectors and interests, the East marine plan areas are providing a significant contribution, particularly through offshore wind energy projects, to the energy generated in the United Kingdom and to targets on climate change.

The objectives address procedural and substantive issues. They are high level and non-directive, for example:

Objective 1 - To promote the sustainable development of economically productive activities, taking account of spatial requirements of other activities of importance to the East marine plan areas.

Objective 6 - To have a healthy, resilient and adaptable marine ecosystem in the East marine plan areas.

The policies address economic and social considerations, environmental and heritage issues and specific activities. They are non-directive (using terminology such as “should”) and do not set priorities, resolve conflicts or set environmental bottom lines, for example:

Policy EC1 - Proposals that provide economic productivity benefits which are additional to Gross Value Added currently generated by existing activities should be supported.

Policy BIO1 - Appropriate weight should be attached to biodiversity, reflecting the need to protect biodiversity as a whole, taking account of the best available evidence including on habitats and species that are protected or of conservation concern in the East marine plans and adjacent areas (marine, terrestrial).

Policy PS3 - Proposals should demonstrate, in order of preference:

a) that they will not interfere with current activity and future opportunity for expansion of ports and harbours

b) how, if the proposal may interfere with current activity and future opportunities for expansion, they will minimise this

c) how, if the interference cannot be minimised, it will be mitigated

d) the case for proceeding if it is not possible to minimise or mitigate the interference

The plans also contain maps of key resources such as marine protected areas, seabird foraging ranges, ports and shipping activity, and opportunities for carbon capture and storage.

Marine Protection

The Act enables the designation of marine conservation zones within UK marine waters⁴⁷ and requires the designated marine protected areas to form a “network” of protected areas which:⁴⁸

- Contributes to the conservation or improvement of the UK marine environment, and
- Is representative of the range of features in the UK marine environment, and
- Reflects the fact that conservation of a feature may require the designation of more than one site.

The MMO aims to establish a network of marine protected areas by 2016.⁴⁹

Marine Conservation Zones have not been designated through marine planning processes. In England, the Marine Conservation Project comprised of four regional stakeholder-led projects, was established to identify marine conservation zones. In September 2011 the Project recommended 127 marine conservation zones (including 65 reference areas to be protected from all damaging activities). An independent science advisory panel of marine experts was established to review the recommendations. In October 2011 it advised that it supported the proposed areas subject to some strengthening of the network. These concerns included that some habitats had not been protected to the extent they should and “the identification of locations for protection has relied greatly on socio-economic considerations with biodiversity often of secondary consideration or taken account of late in the process”. Natural England and the Joint Natural Conservation Committee then scrutinised the recommendations. In July 2012 they advised that they generally supported the recommendations. They also noted some evidence gaps supporting the designation of some sites and inadequacies in the reference areas put forward.

In 2013 the Government consulted on a proposal to designate 31 marine conservation zones. On 21 November 2013 27 marine conservation zones were designated (this did not include any reference areas to be protected from all damaging activities) with a second tranche to be designated in 2015/16 and a third tranche in 2016/17. The Government stated that many of the 127 proposed areas could not be designated as there was inadequate evidence to define the management measures necessary or to support decisions that may have social and economic impacts and effects on peoples’ livelihoods.

No decisions about the protection of the MCZs were made at the time of designation. Measures to protect these sites are to be developed after conservation bodies publish “site-specific conservation advice”⁵⁰ which will then be used to develop management measures to prevent damage to the

⁴⁷ Except for the Scottish or Northern Ireland inshore regions: Marine and Coastal Access Act 2009 (UK), s 116. Marine nature conservation in the inshore waters of Scotland and Northern Ireland is a matter for the Scottish Minister and Northern Ireland Departments to determine through their own legislation: Marine and Coastal Access Act 2009, explanatory notes. See Marine Act (Northern Ireland) 2013 and Marine (Scotland) Act 2010.

⁴⁸ Section 123(3)

⁴⁹ <https://www.gov.uk/government/policies/protecting-and-sustainably-using-the-marine-environment>

⁵⁰ Oliver Bennett, Policy Analyst *Marine Conservation Zones in England* (6 December 2013) House of Commons Library (SN06129)

features of each marine conservation zone.⁵¹ As at June 2014, the designated sites had not received any new binding protection.⁵²

The Marine and Coastal Access Act 2009 includes particular provisions for decisions affecting a marine conservation zone.⁵³ This applies to applications for licensable activities located “in or near” a proposed or designated MCZ. The MMO must first assess if the activity is capable of affecting (other than insignificantly) the protected features of a marine conservation zone (or associated ecological or geomorphological processes). If there may be effects, the MMO must consider whether there is significant risk of the activity hinder the achievement of the conservation objectives stated for the marine conservation zone. If the conservation objectives may be hindered, the application can only proceed if:

- There is no other means of proceeding with the activity which would create a substantially lower risk of hindering the achievement of those objectives, and
- The benefit to the public of proceeding with the activity clearly outweighs the risk of damage to the environment that will be created by proceeding with the activity, and
- The person seeking the authorisation will undertake measure of equivalent environmental benefit to the damage the activity is likely to have on the marine conservation zone.

Analysis

The Marine and Coastal Access Act 2009 is the United Kingdom’s attempt to take a strategic approach to managing the marine environment. It has already exposed is the difficulty of developing comprehensive marine spatial plans and the tensions involved in marine protected areas. Nevertheless, it is driving improvements in the management of the United Kingdom’s marine area which will continue over time (particularly as marine plans are reviewed and updated).

New Zealand can benefit from the learnings of other jurisdictions, including the United Kingdom, who have undertaken marine planning. How to manage conflicts and determine bottom lines is a key challenge, but is not unique to the marine environment. Another key challenge is the limited knowledge of the marine environment. However, our understanding of the marine environment is continuing to grow and marine planning will drive this. There are also some challenges faced in other jurisdictions – including devolved structures or European Union obligations or nearby neighbours – that New Zealand does not need to grapple with.

(h) Solutions

Marine planning

In the territorial sea, decision-makers are guided by the New Zealand Coastal Policy Statement 2010, regional policy statements and regional coastal plans. In some cases, these planning documents set priorities and/or environmental bottom lines. In the exclusive economic zone, decision-makers are

⁵¹ *Marine conservation place criticised* Belfast Telegraph Online (21 June 2014)

⁵² Roberts *England’s marine conservation network is worse than useless* guardian.co.nz (14 June 2014)

⁵³ Section 125. See also Oldland and Moore *The Marine Management Organisation has been issuing “marine licences” under the Marine and Coastal Access Act 2009 since 6 April 2011* Estates Gazette (12 April 2014)

only provided with a list of general matters to “take into account”.⁵⁴ International best practice demonstrates the benefits of a marine policy statement, to set high level policy guidance, and marine plans, to strategically consider how best manage the marine environment.

In New Zealand we have significant experience with marine policy statements through the New Zealand Coastal Policy Statement. A policy statement for the EEZ is likely to be similar in format and content.

Marine spatial plans could assist the management of New Zealand’s EEZ through identifying:

- Ecologically and biologically important marine areas and the connections between them
- The habitats of key species, including marine mammals and seabirds
- Areas of importance to fisheries, including spawning areas
- Marine resources of economic significance (such as petroleum and minerals)
- Important shipping lanes

In time, plans could be further developed to provide more specific management guidance.

Marine protection

Any credible oceans management regime needs to provide for the protection of marine habitats and species, as well as for connections between them. Case-by-case environmental assessment of individual development proposals, on its own, is very unlikely to result in adequate protection of key ocean ecosystems. This is because such assessment cannot adequately address cumulative effects of the significance of effects within the broader marine system. New Zealand also has intentional obligations to establish a representative network of marine protected areas.⁵⁵

New Zealand’s Marine Reserves Act 1971 is severely outdated. It does not apply beyond the 12 nautical mile boundary of the territorial sea. It only allows for the creation of no take marine reserves, whereas current best practice utilised a variety of levels of protection.

New legislation is required. However, it is not enough to create legislation which allows the establishment of marine protected areas. As in the United Kingdom, new legislation should require the establishment of a representative network of marine protected areas (including minimum protection levels for each habitat type) within a defined timeframe.

(i) Looking forward

Legislative Reform

New Zealand requires new marine protected areas legislation. The Government has recognised the inadequacies of the current legislation. In June 2011 the then Environment Minister Hon Dr Nick Smith indicated an intention to reform the Marine Reserves Act during the next term of

⁵⁴ Section 59(2) EEZ Act

⁵⁵ Convention on Biological Diversity, COP7 Decision VII/28

government.⁵⁶ In 2013, as Minister of Conservation, Hon Dr Nick Smith committed to a fundamental relook at marine protected areas.⁵⁷ To date, this has not eventuated.

EDS undertook a comprehensive review of marine protection in New Zealand in 2012.⁵⁸ This contains a number of recommendations which we would expect to see adopted in new marine protected areas legislation including:

Recommendation 2 - New legislation should have as its primary purpose the protection of marine biodiversity. The legislation should also provide for a range of secondary purposes, including cultural and recreational benefits.

Recommendation 3 - New legislation should enable marine protected areas to be created within the territorial sea and the exclusive economic zone.

Recommendation 4 - The legislation should provide for a comprehensive system of marine protection measures, under which all elements of New Zealand's marine protected areas network would be incorporated.

Recommendation 6 - New legislation should provide for a set of categories of marine protection, ranging from a reserve/no-take zone to areas where some sustainable extractive activities are permitted, based on the IUCN system. There should be a minimum requirement that no-take zones protect at least one example of all identified habitat types.

Recommendation 9 - New legislation should provide for a process to develop a comprehensive and representative marine protected area network within the territorial sea and exclusive economic zone. There should be a timeframe for its completion (at the latest by 2020) and requirements for the responsible Minister to report to Parliament periodically on its progress.

Recommendation 13 - New legislation should provide a strong framework for ongoing management of established marine protected areas. This should include the gathering of baseline data upon establishment and on an ongoing basis, provisions for adaptive management and effective enforcement measures.

Legislative amendments will also be required to implement marine planning. It is possible to develop non-statutory marine plans (such as the plan to be developed through SeaChange) however this has a number of disadvantages, including the lack of a binding requirement to give effect to such plans. It would be logical to include a statutory obligation to produce a marine policy statement and marine plans in the EEZ Act. This would be consistent with the RMA framework which includes both planning and consenting. Amendments to sectoral legislation (such as the Fisheries Act 1996 and the Crown Minerals Act 1991) would be required to ensure that decisions made under those statutes were consistent with the marine policy statement and marine plans.

Oceans Forum

⁵⁶ [http://www.edsconference.com/content/docs/2011_papers/Smith,%20Nick%20\(Speech\).pdf](http://www.edsconference.com/content/docs/2011_papers/Smith,%20Nick%20(Speech).pdf)

⁵⁷ <http://www.rmla.org.nz/obiter/view/id/29>

⁵⁸ K Mulcahy, R Peart and A Bull, *Safeguarding our Oceans: Strengthening Marine Protection in New Zealand* (EDS, Auckland, 2012).

At the 2013 EDS conference an ‘Oceans Forum’ was proposed, a collaborative stakeholder process analogous to the Land and Water Forum to consider the future management of our oceans. Key stakeholders representing fishing, mining, petroleum and shipping industries, environmental interests, and scientists attended an inaugural meeting in November 2013. This process is now ramping up and over the next year will develop a collaborative vision for management of New Zealand’s marine area. This process is likely to build social capital and develop tools which will assist with marine spatial planning processes.

III. WELL INTEGRITY

At this point we shift our focus from a strategic level to a specific matter of vital significance to the protection of our seas – making sure that oil and gas wells do not suffer blowouts. Although a blowout is only a remote possibility, it poses a threat to life and limb, to the environment, and to the tourism industries. It is a classic example of a low-probability high-risk adverse effect on the environment, and rightly attracts a good deal of attention. Plugging and abandonment is equally important because it is the work that a company carries out at the end of a well’s useful life to prevent the leakage of gas or liquid from one horizon to another or to the surface. The leaks that occur without good plugging and abandonment can persist for years, and if the operator company is no longer engaged the cost of remedying an “orphan” well will lie on the public. The public interest in well design and management, onshore and offshore, is threefold: (i) environmental protection, (ii) health and safety, and (iii) resource conservation and integrity of subsurface formations. This is why well integrity matters to the public. Let us remember that the companies put enormous effort themselves into ensuring well integrity, but we must accompany good company practice with good quality regulation; we trust, and verify, and we ensure alignment of objectives. In environmental terms, good well design is the fence at the top of the cliff, as an obvious fundamental preventive measure. But we still deal with it in a surprisingly haphazard manner.

(a) RMA

Let us first consider well integrity under the RMA, which applies in the territorial sea, even if strictly speaking it lies outside our stated subject. In our view, there is a great deal of work to do to ensure that oil and gas activity is properly managed. Regional (coastal) plans seem to pay appallingly little attention to oil and gas wells. For example, the Taranaki Regional Plan does not require a resource consent for most wells in the coastal marine area in respect of disturbance of the sea bed, although platforms and occupation of the seabed by equipment are likely to need consents.⁵⁹ The Waikato Regional Coastal Plan has rules for petroleum storage and containment but not for wells.⁶⁰

⁵⁹ Taranaki Regional Council, *Regional Coastal Plan* (1997), Coastal Management Area C, Open Coast, rule C3.1. To be a permitted activity, the well must be 2000 m offshore, less than 1.5 m in diameter, and in compliance with certain other standards. Other activities associated with a well eg discharges and coastal occupation do require consenting. These examples do not constitute a full survey of regional and district plans for their provisions for oil and gas wells – a survey that would be very useful to see executed.

⁶⁰ Waikato Regional Council, *Waikato Regional Coastal Plan* (2011) 16.4.18 and 16.4.19 (structures). Disturbances and deposits to the foreshore and seabed are regulated in respect of the removal of sand, shingle, shell or other natural marine material: 16.6.10 to 16.6.18. Whether that includes oil and gas drilling is

It is hard to see how a regional council can possibly meet its RMA obligations to protect the environment with provisions of this kind. Permitted activity status means that the regional council cannot set requirements for baseline monitoring, well design and construction, well testing, or monitoring of casing and sealing. It cannot deal specially with areas of difficult geology or seismology. It parallels the situation onshore, where in Taranaki an oil well is a permitted activity as long as it is cased and sealed, and is no closer than 50 m to any effluent treatment pond, septic tank, or silage stack or pit.⁶¹ Research into the history of this rule may well show that water bores and not oil wells were its chief object. Given the amount of controversy and attention that oil and gas attract, this is very strange. The Parliamentary Commissioner for the Environment criticizes this rule and its proposed successor which is not much better.⁶² Environmental regulators need to lift their game.

Equally, decommissioning oil and gas wells through best-practice plugging and abandonment should be closely regulated. The minerals regulator, New Zealand Petroleum and Minerals, says that it expects regional councils and the EPA to carry out that regulation.⁶³ It might be in for some surprises if it goes out to find out whether its expectations are met in reality. It acts itself to require a permit holder properly to decommission production facilities and abandon wells in accordance with good industry practice – a useful back-up but light on detail, inspection and effect after permit expiry as well as beforehand.⁶⁴ Again, environmental regulators need to lift their game.

While there are reasons to be worried about how the RMA is being applied in this field, recent experience in Gisborne shows that a unitary council is able to give good effect to the RMA in considering oil well projects onshore as a discretionary activity. TAG Oil (NZ) Ltd prepared an application and assessment of environmental effects that gave a full account of possible and likely effects on the environment, mitigation through well design, and risk management. The Council was equipped to process and decide the application against the RMA's criteria.⁶⁵ While this may sound like entirely routine business-as-usual, it may mark the end of a time when RMA authorities, both territorial and regional, were only lightly engaged with oil and gas drilling and in particular with its subsurface aspects. If councils now realize that they must apply the RMA to what goes on below the surface and must treat oil and gas wells differently from water bores, then that is a good step.

The inquiry of the Parliamentary Commissioner for the Environment into hydraulic fracturing of wells broadened out into a broader review of the country's environmental oversight and regulation of oil

moot, but the key point is that the activity is not dealt with in specific suitable terms. If it is not caught by these rules provisions, then the default rule in s 12 applies and a resource consent is needed.

⁶¹ Taranaki Regional Council, *Regional Fresh Water Plan*, rule 46; Taranaki Regional Council, *Guide to Regional Plans in Taranaki for Oil and Gas Exploration and Production Activities* (2001).

⁶² Parliamentary Commissioner for the Environment, *Drilling for Oil and Gas in New Zealand: Environmental Oversight and Regulation* (2014) p 29.

⁶³ *Petroleum Programme (Minerals Programme for Petroleum)* (2013) p 52, 8.9.

⁶⁴ *Petroleum Programme (Minerals Programme for Petroleum)* (2013) p 62, 11.1(1)(l).

⁶⁵ Gisborne District Council, *Reports on Non-Notified Resource Consent* (TAG Oil Ltd, Punawai-1 well) n.d. 2013; Gisborne District Council, *Combined Notification and Section 104 Decision Report* (application by TAG Oil (NZ) Ltd for Waitangi-1 well), 15 April 2014. The Parliamentary Commissioner for the Environment says that Horizons Manawatu Wanganui Regional Council has also granted such a consent: *Drilling for Oil and Gas in New Zealand: Environmental Oversight and Regulation* (2014) p 43.

and gas drilling.⁶⁶ This was sensible because the legal issues and the environmental risks concerned with fracking are only a subset of those arising from oil and gas activities generally. Although the report does not cover offshore oil and gas activities, it is relevant to regulation of the territorial sea under the RMA, and at least by analogy to regulation under the EEZ Act. Recognizing the value of preventive measures, the report put a good deal of its effort into the question of well integrity. It quotes a report by the Royal Society on fracking, “Ensuring well integrity must remain the highest priority to prevent contamination.”⁶⁷ Regional plans, the Commissioner recommends, should classify oil and gas wells as discretionary activities, they should identify areas where drilling should not occur, and they should lay down requirements for monitoring and for public notification. Perhaps intended to show government action on the matter, the Ministry for the Environment released guidelines for local government for the management of onshore petroleum development. Their import is descriptive and advisory, but in the present circumstances they would raise levels of council performance if they were followed closely.⁶⁸ All told, there is a surprising amount of work to be done to provide proper environmental management of oil and gas operations under the RMA

(b) National Rules and Policy

The number of oil and gas wells we are talking about may give us some indication of the way ahead. The number is not high. The average number of wells drilled per annum over the last 15 years is 6 offshore wells and 26 onshore wells.⁶⁹ Some of the offshore wells will be in the EEZ and others will be in the territorial sea (such as at Pohokura). Each well project brings with it much the same concerns about the low-probability high-impact effect of a failure of well integrity; they do not differ much in different parts of the country. Oil wells are complex and expensive projects, especially offshore, and they draw on specialized engineering expertise. From environmental regulators they therefore need a complex and specialized response. Levels of public concern are high, but regional plans seem extraordinarily unsuitable, even after years of public and professional awareness of the issues. The conditions seem ideal for policy to be stated on a nation-wide basis, through amendment of the New Zealand Coastal Policy Statement for offshore wells, a new National Policy Statement for onshore wells, and a National Environmental Standard which would ensure that oil and gas wells are dealt with explicitly and separately from water bores, no doubt as a minimum giving wells a discretionary activity status.⁷⁰ An NPS was the first recommendation of the Parliamentary Commissioner in her 2014 onshore report.⁷¹ It seems important that the NZCPS and other

⁶⁶ Parliamentary Commissioner for the Environment, *Drilling for Oil and Gas in New Zealand: Environmental Oversight and Regulation* (2014), following *Evaluating the Environmental Impacts of Fracking in New Zealand: An Interim Report* (2012).

⁶⁷ Royal Society and Royal Academy of Engineering, *Shale Gas Extraction in the UK: a Review of Hydraulic Fracturing* (2012).

⁶⁸ Ministry for the Environment, *Managing Environmental Effects of Onshore Petroleum Development Activities (Including Hydraulic Fracturing): Guidelines for Local Government* (2014). The *Guidelines* were a major part of the government response to the PCE Report: A Adams, S Bridges, Press Release, “Ministers Welcome Final PCE Report on Oil and Gas” 4 June 2014, available www.beehive.govt.nz.

⁶⁹ Source: NZPAM statistics, 1999-2012 and 2012 and 2013. Numbers

⁷⁰ Onshore wells in familiar formations could perhaps be given a less restrictive activity status.

⁷¹ p 76.

instruments are used to put in place basic acceptable requirements for environmental regulation of oil wells.⁷² Under most regional and territorial authorities, these basic requirements are missing.

(c) Health and Safety in Employment

The key environmental safeguard of well integrity is provided by our health and safety laws. The recent Ministry for the Environment *Guidelines* put it like this:⁷³

Well design and integrity are important matters to consider for managing risk to both health and safety and the environment. The regulation of well design and integrity to manage risk to health and safety is the responsibility of the High Hazards Unit (part of WorkSafe New Zealand) under the HSE(PEE) Regulations.

The good news is that this regulation is now reasonably good in its quality. The Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 2013 are newly revised. They are better than the 1999 version. Gone are the astonishing provisions that only required a company to take all practicable steps to notify certain events, or to keep and supply certain records, or to use certain casing, or to plug and abandon a well properly.⁷⁴ The safety case, which is the key company safety management system, must now be approved by Work Safe NZ, and not merely sent there to be filed away, and it is a direct obligation rather than a requirement to take all practicable steps.⁷⁵ This is a big improvement. The installation must have a current certificate of fitness, and there must be a verification scheme for safety-critical elements. Well design, construction and operation are subject to a number of specific duties; in particular a well must be designed, constructed, operated and abandoned so that as far as reasonably practicable there can be no unplanned escape of fluids from the well.⁷⁶ Wells are subject to the approval of an independent and competent person through a well examination scheme.⁷⁷ Health and safety laws therefore provide a high level of close and continuing regulation.

The bad news is that WorkSafe New Zealand has no legal mandate to regulate to protect the environment. The powers that Parliament in the Health and Safety in Employment Act confers on the Governor General to make regulations, and the powers conferred on WorkSafe, can only be used to promote the policy and objects of the Act; and there is no mention of protecting the

⁷² The only mention of minerals in the current NZCPS is a mention of mineral extraction in its preamble and in Policy 6(a), to recognize that the activities of mineral extraction are important to the social cultural and economic well-being of people and communities.

⁷³ Ministry for the Environment, *Managing Environmental Effects of Onshore Petroleum Development Activities (Including Hydraulic Fracturing): Guidelines for Local Government* (2014) p 12.

⁷⁴ In any other regulatory regime such obligations would be imposed directly, with impracticability and the like being dealt with through the discretion to enforce.

⁷⁵ Cf Reg 22 of the 1999 Regulations with Reg 25 of the 2013 Regulations. "Lower-tier production installations" onshore do not need a safety case

⁷⁶ Reg 64. The duty extends to ensuring that risks to the health and safety of persons from the well or anything in it, or from the strata to which the well is connected, are as low as is reasonably practicable. The operator must assess geological strata and hazards in the design and through the course of well operations. Suitable well control equipment must be provided.

⁷⁷ Reg 71.

environment. Nor is there in the new Bill.⁷⁸ It is elementary administrative law that a power can only be exercised for the purposes that Parliament prescribes. Even if the other purpose is a worthy one, or if it would be generally convenient to exercise the powers to in such a way, the regulations or exercise of statutory powers for a purpose not contemplated by the Act would be *ultra vires*.⁷⁹ It is unlikely that an environmental regulator (a regional council or an EPA decision-making committee) can say that it relies on WorkSafe for well integrity and plugging and abandonment

Thus, we are depending on the health and safety regulators for key parts of our environmental protection, but they do not have the power to act for environmental purposes. It all depends on the notion of a happy and tidy coincidence of health and safety with the environment. However the two are not the same and may not always coincide, for example a blowout could be managed by discharging oil into the water column rather than letting it get near people on an offshore platform. Onshore, groundwater contamination from other formations is an example; the environment is adversely affected but not health and safety.

The Parliamentary Commissioner for the Environment makes the same analysis.⁸⁰ WorkSafe have no mandate for protecting the environment, and neither they nor well examiners under the Regulations are required to ensure that the design of a well in an environmentally sensitive area is adequate. Nor can they be directed to monitor for environmental purposes. Nor do they have responsibility for abandoned wells that are no longer workplaces. The Health and Safety Regulations only indirectly protect the environment. The Commissioner puts the matter prominently among her recommendations. She suggests alternatives, the first being that regional councils include the protection of freshwater layers as a condition in consents for drilling oil and gas wells. The difficulty with this is that (as we have seen) most regional plans are deeply inadequate and in some cases allow wells as a permitted activity, onshore and offshore, and changing plans will take years. In addition, groundwater is not the only problem. The second alternative is preferable; amend the health and safety legislation to require environmental protection to be included. To do the job properly the Act must be amended, not only the Regulations. The Ministry Guidelines are much milder, urging co-operation but conceding that there is no legal basis for integration.⁸¹ The result is that we must regulate well integrity twice, once for health and safety, and a second time for the environment. (And arguably a third time for resource conservation.) The present situation is a threat to the environment, because that regulation is not being done properly. If it was being done properly then under our present law industry is faced with unnecessary duplication in regulation, not only in the initial permitting but also in the subsequent inspections and monitoring. We can do better.

⁷⁸ In the Health and Safety at Work Bill, cl 222 seems to be the only mention of the environment, and it only allows for the environment to be considered in the regulation of hazardous substances. Hazardous substances are a start but only a small one.

⁷⁹ GDS Taylor, *Judicial Review of Administrative Action*, 3rd ed (2014) p 715. The leading case is *Padfield v Minister of Agriculture, Fisheries and Food* [1968] AC 997. The grounds of improper purpose, irrelevant purpose and simple unlawfulness tend to run into each other in a case of this kind.

⁸⁰ Parliamentary Commissioner for the Environment, *Drilling for Oil and Gas in New Zealand: Environmental Oversight and Regulation* (2014), pp 43, 46 and 79. One of the present authors made the same point in 2011: B Barton, "Offshore Petroleum and Minerals" [2011] NZLJ 211.

⁸¹ *Guidelines* (2014), above, p 13.

Internationally, it may only be the United Kingdom that relies on health and safety regulation in this way for environmental purposes. In Australia and Canada, petroleum operations are subject to specialist regulators who evaluate all aspects of a well proposal, and not merely their health and safety aspects.⁸²

The United Kingdom has decided that that change is necessary in the regulation of offshore oil and gas for health and safety and environmental purposes. The UK regulatory philosophy in health and safety (which has been influential in New Zealand) is one of “goal-setting” regulation, that is, performance-based regulation.⁸³ An independent review in 2011 affirmed that philosophy but called for changes to ensure that safety cases are in fact reliably implemented, to ensure that the learning culture improves, and to ensure that best practice improvements spread rapidly through the industry.⁸⁴ These recommendations seem relevant for New Zealand. Also directly relevant to New Zealand is a recommendation for a proper alignment of health and safety regulation and environmental regulation: the Royal Society and Royal Academy of Engineers say, “Well designs should be reviewed by the well examiner from both a health and safety perspective and an environmental perspective.”⁸⁵

So a targeted change is needed to ensure well integrity is regulated for environmental purposes, in order to ward off one of the most visible risks to our seas. The change would make sure we have proper regulation in place, and can in fact be carried out in a way that would reduce regulatory complexity for the affected industry.

(d) Crown Minerals Act

For the sake of completeness we should note that in New Zealand well operations are not regulated under the Crown Minerals (Petroleum) Regulations 2007, except for requiring notice in advance of, and reports after, operations such as well-drilling operations, well completion, and well abandonment. There is no requirement for approval. Notice is now required of well workovers and well stimulation operations, which includes hydraulic fracturing.⁸⁶ But we cannot look to the Regulations for detailed control of how oil wells are drilled, operated and abandoned, onshore or offshore. The reliance on health and safety laws for environmental protection, without explicit mandate and powers in those laws, should be reconsidered.

IV. INTEGRATION OF DIFFERENT STATUTORY REGIMES

⁸² See Barton, [2011] NZLJ 211, above.

⁸³ See J Dagg, P Holroyd, N Lemphers, R Lucas and B Thibault, *Comparing the Offshore Drilling Regulatory Regimes of the Canadian Arctic, the US, the UK, Greenland and Norway* (Pembina Institute, 2011) p 31.

⁸⁴ *Offshore Oil and Gas in the UK: an Independent Review of the Regulatory Regime* (G Maitland, Chair, 2011) available www.gov.uk.

⁸⁵ Royal Society and Royal Academy of Engineering, *Shale Gas Extraction in the UK: a Review of Hydraulic Fracturing* (2012) p 27, quoted by the Parliamentary Commissioner for the Environment, *Drilling for Oil and Gas in New Zealand* (2014) above, p 46.

⁸⁶ Crown Minerals (Petroleum) Regulations 2007 regs 29-34E and 38-48.

The marine environment is “governed by more than 18 primary statutes and numerous subordinate regulations and [is] managed by a myriad of central and local government organisations.”⁸⁷ This creates challenges for integrated management. What mechanisms are currently provided to ensure co-ordinated management of our oceans? Where are improvements required to improve co-ordination?

(a) Integration Across Boundaries: the interface between the RMA and the EEZ Act

The 12 nautical mile ‘division’ between the territorial sea and the exclusive economic zone is a legal boundary (see Figure 6 below). It is arbitrary in environmental management terms and does not relate to any physical features or characteristics. The two areas are integrally linked through the flow of water and marine life.

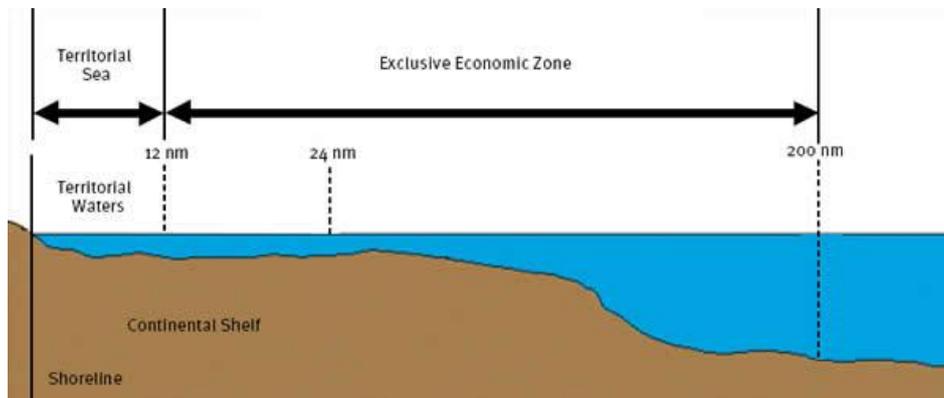
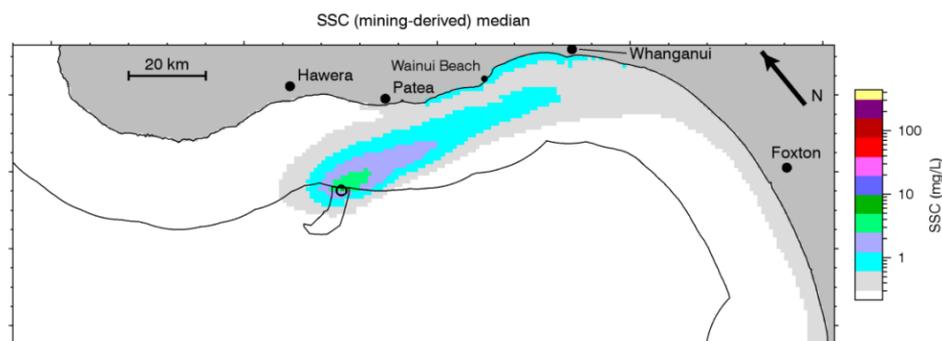


Figure 6 – Maritime boundaries⁸⁸

As a result, environmental effects of activities are unlikely to be constrained to either area. An example is provided by the Trans-Tasman Resources application to mine iron sands in the South Taranaki Bight. The proposed mining site was located on the seaward side of the 12 nautical mile boundary. The applicant’s sediment plume modelling forecast that the sediment plume (caused by the return of unwanted sediment to the seafloor) would predominately affect the coastal marine area (see Figure 7 below).



⁸⁷ Ministry for the Environment, 2011

⁸⁸ <http://www.mfe.govt.nz/environmental-reporting/marine/marine-protected-areas-indicator/marine-areas-legal-protection.html>

Figure 7: Median near-surface concentration of suspended sediment from mining source A (Hadfield (October 2013) Figure 5-3(b))⁸⁹

Boundaries are, of course, inevitable. The question is how we manage them. The EEZ Act provides two mechanisms to account for the arbitrary boundary between the coastal marine area and the exclusive economic zone. The first provides for a joint application process for cross-boundary activities. The second provides for the consideration of the RMA regime in the context of a marine consent application.

Cross boundary activities

The EEZ Act contains provisions addressing ‘cross-boundary’ activities. A cross-boundary activity is defined to mean *an activity that is carried out partly in the exclusive economic zone or in or on the continental shelf and partly in New Zealand* (section 88).

Where both a resource consent (under the RMA) and a marine consent (under the EEZ Act) is required, an applicant may prepare a joint application for consent or it may apply for a marine consent and a resource consent separately (concurrently or at different times).⁹⁰ If an applicant does not prepare a joint application, the EPA may nevertheless require a joint application. If the EPA requires a joint application it may pause the processing or hearing of the marine consent application until the resource consent application is lodged, or, return the marine consent application as incomplete.⁹¹

To date, no applications have been lodged for a cross-boundary activity and we have yet to see how this regime will work in practice.

In relation to the Trans-Tasman Resources application, submitters⁹² questioned whether a resource consent was required to authorise the deposition of material on the seabed within the coastal marine area. The Trans-Tasman Resources Decision Making Committee did not determine whether a resource consent was required⁹³ but, in any event, it was satisfied that “if we were to grant a marine consent, we have the ability to set conditions which address effects within the EEZ as well as within the CMA.”

Other marine management regimes

Section 59(2)(h) of the EEZ Act requires decision-makers to take into account ‘the nature and effect of other marine management regimes’.⁹⁴ The Trans-Tasman Resources decision states:⁹⁵

⁸⁹ http://www.epa.govt.nz/Publications/NIWA_sediment_plume_modelling_report.pdf

⁹⁰ Section 90 EEZ Act

⁹¹ Section 93 EEZ Act

⁹² Taranaki Regional Council and Environmental Defence Society

⁹³ TTR decision at [75] and Hearing Transcript 14 April 2014 at 1611-1615

⁹⁴ Marine management regime is defined to mean “the regulations, rules and policies made and the functions, duties and powers conferred under an Act that applied to any 1 or more of the following (a) territorial sea; (b) exclusive economic zone; (c) continental shelf”. Marine management regimes includes those established under the Biosecurity Act 1993, Continental Shelf Act 1964, Crown Minerals Act 1991, Defence Act 1990, Fiordland (Te Moana o Atawhenua) Marine Management Act 2005, Fisheries Act 1996,

... the RMA is a significant 'other marine management regime' as it is the predominant legislation governing the use, development and protection of the coastal marine area... The RMA and its subordinate documents do not apply directly to the EEZ, and there is no requirement in the EEZ Act that we give effect to these documents when deciding marine consent applications. However, we make the following observations:

(a) The proposed activity is to take place immediately adjacent to the coastal marine area, and many of the proposed activity's effects will occur here; effects from the sediment plume being the most obvious example, and

(b) The NZCPS, RPS and RCP give guidance as to the important values within the coastal marine area and how sustainable management (in the RMA sense of that term) is to be achieved and therefore it is appropriate for us to consider those documents...

Given our findings summarised above and "taking in account" the RMA policy documents, we are not convinced that the proposal would satisfy the relevant policies of the New Zealand Coastal Policy Statement, the Regional Policy Statement or the Regional Coastal Plan so far as those documents apply to activities occurring in the coastal marine area. While that finding does not preclude us granting marine consents under the EEZ Act (since the RMA documents are not ones we need to give effect to under the EEZ Act), they provide important guidance as to whether the potential effects of the proposal, as mitigated, are acceptable in the marine environment.

The EEZ Act requires the decision-maker to 'take into account' the RMA and its subordinate documents. It is a mandatory consideration. A finding that the proposal would not satisfy the relevant policies of the New Zealand Coastal Policy Statement or other RMA planning document does not preclude the granting of a marine consent.⁹⁶ Nevertheless, the above decision demonstrates that, where effects will occur in the coastal marine area, the RMA and its subordinate documents are very relevant and should be given substantial weight by the decision-maker.

In comparison, while the RMA requires regional councils to have regard to "the extent to which the [planning document] needs to be consistent with the regulations made under the [EEZ Act]" when preparing a regional policy statement or regional plan⁹⁷ there is no *mandatory* requirement to consider the EEZ Act regime when making a decision on resource consent applications which effect the EEZ.

At this early stage, it appears that the EEZ Act provides for integration to the extent that can be achieved through a consenting regime and without marine spatial planning. Amendments to other statutes, such as the RMA, may improve integration across boundaries.

Hauraki Gulf Marine Park Act 2000, Marine and Coastal Area (Takutai Moana) Act 2011, Marine Mammals Protection Act 1978, Marine Reserves Act 1971, Maritime Transport Act 1994, Resource Management Act 1991, Submarine Cables and Pipelines Protection Act 1996, Wildlife Act 1953: section 7 EEZ Act.

⁹⁵ TTR decision at [754], [759] and [760]

⁹⁶ Nor would it preclude the granting of a resource consent for a discretionary activity in the coastal marine area as the RMA only requires decision makers to "have regard to" planning documents.

⁹⁷ Sections 61 and 66 RMA

(b) Integration of Different Legislation

As well as integration across physical boundaries, we must contend with integration of different regulatory regimes. Each agency administers its own regime, under legislation that has been written to keep the agency focused, to prevent it from introducing extraneous considerations, and to prevent it from using information for ulterior motives. This creates silos. This is not uncommon, indeed it is routine in our legal system. Efforts to reduce separation are made from time to time; for example, we noted above that powers over dumping and certain discharges at sea are being transferred from the Maritime Transport Act 1994 to the EEZ Act. The change should allow the Environmental Protection Authority to provide more integrated environmental regulation of offshore activities.

Integrating the Crown Minerals Act with the EEZ Act and Other Laws

Modest efforts towards integration, or at least co-ordination, are provided by three provisions new to the Crown Minerals Act in 2013. The first is a requirement that an applicant for a permit, such as a petroleum exploration permit, to satisfy the Minister that it has or is likely to have the capability and systems likely to be required to meet the health and safety and environmental requirements of all specified Acts, including the HSEA, RMA and EEZ Act.⁹⁸ For that purpose the Minister may obtain the views of WorkSafe NZ, the EPA, an RMA consent authority, Maritime NZ, or the Department of Conservation. Secondly, for offshore petroleum permits and other Tier 1 permits, NZPAM may require the holder to attend an annual review meeting for monitoring progress and discussion between the permit holder, NZPAM and other regulatory agencies.⁹⁹ NZPAM must invite any regulatory agency that it thinks is likely to have regulatory oversight of the activities under the permit, but it may limit the agency's participation only to those parts of the meeting that are relevant to its oversight. This provides an opportunity to integrate environmental matters with the overall management of the permit, but it is not accompanied by any increase in regulatory powers. Thirdly NZPAM has new information-sharing powers for permits and applications for permit. It may provide WorkSafe NZ, Maritime NZ, the EPA, or an RMA consent authority with any information it holds that may assist that agency in the performance of its duties under the HSEA, RMA, or EEZ Act.¹⁰⁰ All of these are worthwhile co-ordination mechanisms, facilitating joined-up regulation. However they are all firmly under NZPAM's control and largely at its discretion. They enable NZPAM to avoid the worst effects of independent regulatory silos, but they do not compel it.

On the other hand, the 2013 amendments to the Crown Minerals Act dropped references to "recognised good exploration or mining practice" in favour of "good industry practice" and the term has been defined to exclude practice in relation to any aspect of the activity regulated under environmental legislation. It means that environmental aspects of good practice are shut out of CMA decision-making at key decision points such as granting a permit, amending petroleum mining work

⁹⁸ Crown Minerals Act 1991 ss 29A & 29B. For NZPAM's intentions in implementing this, see *Petroleum Programme (Minerals Programme for Petroleum)* (2013) p 29.

⁹⁹ Crown Minerals Act 1991 s 33D. For NZPAM's intentions, see *Petroleum Programme* (above) p 65.

¹⁰⁰ Crown Minerals Act 1991 s 90E.

permits, and approving work programmes.¹⁰¹ While this is perhaps intended to avoid duplication, it misses an opportunity to integrate and value the environmental aspects of good industry practice.

(c) Integration: Brief Notes in Comparison with the United Kingdom and Canada

Offshore oil and gas operations in the United Kingdom are subject to elaborate regulation both for health and safety and for the environment. Regulations are made under a number of different statutory powers and European Union requirements.¹⁰² The independent review in 2011 recommended a more integrated regulatory system to address the complex spread of offshore regulation over three authorities.¹⁰³ In particular, the Department of Energy and Climate Change and the Health and Safety Executive at present operate under separate legal regimes, even though they have a memorandum of understanding in place for administrative co-ordination.

In fact better regulatory integration is being pressed by the European Union Directive on Safety on Offshore Oil and Gas Operations of 2013.¹⁰⁴ The Directive calls for operations to be regulated as to health and safety and as to the environment so as to prevent major accidents. That regulation, by a “competent authority” should be separate from the agency responsible for offshore resources development and royalties. The competent authority should be structured so as to reduce the existing divergence and fragmentation of the regulatory framework. The UK proposes to set up an umbrella “Competent Authority” that would include the existing parts of DECC and HSE, similarly to the existing Competent Authority for the Control of Major Accident Hazards (COMAH). But there are questions over the workability of such an arrangement and its compliance with the EU Directive.¹⁰⁵ For New Zealand, it is arguable that the lessons we get from this are that we should not look at UK arrangements as the perfect model for us. While there is a lot that we appear to have imported from the UK and Europe generally to our benefit, such as the safety case and other elements of performance-based regulation, the UK faces problems not unlike ours in regulatory design to reduce separation and duplication.

The Report of the UK Royal Society and Royal Academy of Engineering on shale gas and hydraulic fracturing has already been noted.¹⁰⁶ It is clear in its conclusion that ensuring well integrity must be the highest priority to prevent contamination. What the Report says on this is of general application to petroleum operations, both offshore and onshore, in New Zealand as much as anywhere else. The Report commends goal-based regulation but calls for environmental and health and safety regulators to work together, and in particular for well designed to be scrutinized by well examiners

¹⁰¹ Crown Minerals Act 1991 ss 1A (purpose), 2, 29A, 33, 37, 38, 43 and 44. Also Crown Minerals (Petroleum) Regulations 2007 reg 35: “All well-drilling operations carried out under a permit must be carried out in accordance with good industry practice.” Previously, similar terms like “good oilfield practice” were used and discussed in the *Minerals Programme for Petroleum* (2005) but not defined: see Barton [2011] NZLJ 211.

¹⁰² See J Dagg, P Holroyd, N Lemphers, R Lucas and B Thibault, *Comparing the Offshore Drilling Regulatory Regimes of the Canadian Arctic, the US, the UK, Greenland and Norway* (Pembina Institute, 2011) p 31.

¹⁰³ *Offshore Oil and Gas in the UK: an Independent Review of the Regulatory Regime* (G Maitland, Chair, 2011) available www.gov.uk.

¹⁰⁴ Directive 2013/30/EU of 12 June 2013 on Safety of Offshore Oil and Gas Operations and amending Directive 2004/35/EC (Text with EEA relevance).

¹⁰⁵ L Mackett and S Boileau, “The Offshore Safety Directive (3) – Competent Authority” Dentons blog targetukenergy.com, 1 July 2014.

¹⁰⁶ *Shale Gas Extraction in the UK: a Review of Hydraulic Fracturing* (Royal Society and Royal Academy of Engineering, 2012).

from both a health and safety and an environmental perspective. Better regulatory co-ordination is also required.

Although several jurisdictions in Canada would make good comparisons, that of the federal government through the National Energy Board in relation to Arctic, Gulf of St Lawrence and West Coast waters is particularly instructive. The Canada Oil and Gas Operations Act¹⁰⁷ imposes regulation separately from arrangements for the allocation of permits and collection of royalties, and brings together regulation that would otherwise be dispersed. The Act clearly empowers the regulator to act for multiple purposes, not one such as health and safety. The purpose section is as follows.

2.1 The purpose of this Act is to promote, in respect of the exploration for and exploitation of oil and gas,

(a) safety, particularly by encouraging persons exploring for and exploiting oil or gas to maintain a prudent regime for achieving safety;

(b) the protection of the environment;

(b.1) the safety of navigation in navigable waters;

(c) the conservation of oil and gas resources;

(d) joint production arrangements; and

(e) economically efficient infrastructures.

This governs the power of the National Energy Board to issue an operating licence. The power to make regulations in section 14 is equally clear in stating that it is “for the purposes of safety and the protection of the environment as well as for the production and conservation of oil and gas resources”. This structure of a single regulator addressing safety and protection of the environment was the result of the Royal Commission into the sinking of the *Ocean Ranger* semisubmersible off Newfoundland in 1982.¹⁰⁸ The legislation could readily be copied for example to ensure that WorkSafe NZ can take environmental protection into account.

(d) How do we produce real co-ordination?

At the present our EEZ and other marine resources regulation shows many weaknesses of separateness or fragmentation. Institutional silos are a problem. The MfE *Guidelines* concede the point but make weak recommendations. The Parliamentary Commissioner for the Environment certainly sees the problems of complexity and fragmentation. The problems seem particularly unfortunate in relation to oil and gas activity, where only a handful of wells are drilled each year.

Perhaps it is useful to distinguish between integration, which implies tight linkage or even monolithic institutional control, and co-ordination, which accepts the facts of physical and institutional boundaries but seeks to make productive relationships across the boundaries. This is because integration of management of the EEZ and the territorial sea would only make it more difficult to

¹⁰⁷ RSC 1985 c. O-7.

¹⁰⁸ *Royal Commission on the Ocean Ranger Marine Disaster, Report* (Hickman Report) 1984. See Dagg et al (2011) p 49.

manage the boundary between the territorial sea and the land. In addition, looking for integration under One Big Agency can produce as many problems as it solves; the boundary problems simply move elsewhere, or become problems of internal co-ordination and management. On the other hand, we need to be quite clear that informal mechanisms for co-operation will often not produce the results we need to improve environmental performance. A memorandum of understanding between two agencies, for example, cannot limit the legal duties of either agency, it cannot waive restrictions on information-sharing, and it cannot revise the purposes and functions for which statutory powers are conferred.

What we believe is necessary are mechanisms in different statutes that have the following characteristics:

- Statutory purposes couched in terms that allow other important matters to be pursued and taken into account. For example the Health and Safety in Employment Act, and its successor, should allow, and require, environmental purposes to be pursued in certain situations. On the other hand, legislation should be clear in allocating primary responsibility. Offshore we currently have no clear 'champion'.
- A legal duty to co-operate and co-ordinate with named agencies. This would be useful offshore but indeed in much other environmental legislation.
- Formal mechanisms such as consultation and annual meetings.
- A legal obligation to take another agency's input in such mechanisms into account in making decisions under its legislation.
- A power and duty to share information acquired under one's own statutes with those responsible for administering specified other statutes. Such provisions could ease the burden on companies providing similar but different information to multiple agencies, while at the same time producing better outcomes.
- A power and duty to share specified monitoring and inspection functions and to share the information arising therefrom.
- A requirement to have regard to management regimes applying in adjacent areas or in the same area to different activities.

V. CONCLUSIONS

In this paper we have sought to make several points about the state of the EEZ regulatory framework:

- Spatial planning, including marine protected areas, need to be provided for in the legislation. The view that spatial planning would not be necessary in the EEZ Act is already looking untenable, at a cost to the environment and to the companies that seek clarity in operating there.

- Oil and gas well integrity needs better regulation. It is the key to handling the low-probability high-effect risk of loss of control, a blowout, which is perhaps the biggest public concern in offshore environmental management.
- At present our legislation leads unduly to regulatory silos. There will always be boundaries and multiple agencies at work, and we need our laws to provide better co-ordination.

Some of these points apply equally in the EEZ, the territorial sea, and for that matter on land. While there are other concerns about our developing arrangements for protecting the environment of the EEZ, the ones that we identify here seem to be pressing.