Ministry for the Environment
Manatū Mō Te Taiao

Proposed policy for regulating decommissioning under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012

DISCUSSION DOCUMENT

New Zealand Government

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Making Aotearoa New Zealand the most liveable place in the world
Aotearoa – he whenua mana kura mō te tangata

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Message from the Minister

New Zealand has one of the largest exclusive economic zones (EEZ) in the world. The Government's vision for the EEZ is to manage its resources wisely and to ensure the quality and diversity of our marine environment is maintained.

New Zealand has a significant petroleum production industry. The infrastructure related with operating these facilities will need to be taken out of service (decommissioned) when production ceases. The environmental effects of decommissioning will depend on what happens with this infrastructure. This is, I should say, not related to the Government's recent decision not to offer further offshore oil and gas exploration permits.

The Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act) forms part of the regulatory system for oil and gas operations. It promotes the sustainable management of natural resources and protects the environment from pollution. The Government is proposing regulations under the EEZ Act to introduce new requirements to better manage the effects of decommissioning offshore installations used in connection with petroleum production.

What happens at sea beyond 12 nautical miles impacts communities and they need to be properly engaged. These proposed regulations aim to improve the process for decommissioning by requiring public consultation on decommissioning plans. The regulations would also enable a broad consideration of impacts that cannot be easily achieved through individual consent applications.

As a signatory of the United Nations Convention on the Law of the Sea 1982 (UNCLOS), New Zealand has important international rights and obligations. We exercise sovereign rights for the purpose of exploring and exploiting, conserving and managing our natural resources, but we also have obligations to protect and preserve the marine environment and to prevent, reduce and control pollution.

I welcome your feedback on the proposals. It is crucial that effective regulation be in place to give the public confidence that any activity carried out in the EEZ will ensure protection of our marine environment.

Hon David Parker
Minister for the Environment

Section 1: About this consultation

In this section we outline matters we are seeking feedback on. We also describe the Government's objectives for developing decommissioning regulations.

What is the purpose of the consultation?

The Government is proposing regulations under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act) to strengthen the regulatory framework for the decommissioning of offshore oil and gas structures and pipelines in the Exclusive Economic Zone (EEZ).

Decommissioning includes activities that must occur at the end of an installation or field's economic or productive life, such as the removal or abandonment of platform installations and other structures, and the removal of pipelines or cables.

Decommissioning is complex and costly,[1] and requires a strategic approach. We believe better outcomes for the sustainable management of the EEZ would occur if companies plan for decommissioning as part of the lifecycle of the petroleum project, and well before the start of decommissioning activities. The proposed regulations aim to ensure decommissioning:

- is done in line with the purpose of the EEZ Act
- reflects international best practice
- involves appropriate public consultation
- is carried out in a cost-effective manner.

Certain policy decisions have already been made. The Government amended the EEZ Act in 2017, introducing new provisions for decommissioning offshore oil and gas facilities. The amendments included a new requirement for operators to provide an accepted decommissioning plan with any decommissioning-related marine consent application (processed as non-notified).

The amendments were needed because there was no incentive for operators to engage early with the public or the EPA to plan for decommissioning. This creates uncertainty for government and the public as to how operators may approach decommissioning of offshore infrastructure.

While many decommissioning activities require marine consent, the marine consent process only allowed for the EPA to grant or refuse an activity that has been applied for. The process didn't provide for an iterative dialogue between the relevant marine management agencies, the public and the operator to establish the best overall approach to decommissioning.

Unlike other activities requiring marine consent, decommissioning must occur, and it is important to ensure it is done in line with the purpose of the Act. Requiring a decommissioning plan provides a tool to present a holistic view of the entire decommissioning project and facilitate public consultation early in the process. To understand more about these amendments, see section 2.

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[1] The Crown is liable to pay up to 42% of decommissioning costs as tax and royalty credits to operators (based on such expenses being properly tax deductible). You can find out more on IRD's website as this matter is outside the scope of these regulations which are about environmental effects.

This consultation seeks feedback on proposals, in accordance with section 32 of the EEZ Act,[2] to develop regulations on the following matters:[3]

- the contents of a decommissioning plan
- the process for the EPA to deal with a decommissioning plan
- the criteria for accepting a plan.

We are not consulting on existing provisions in the EEZ Act for decommissioning, although relevant extracts of the EEZ Act are quoted throughout this document (where they provide useful context for how these proposed regulations would work). This document contains policy proposals, not the regulations themselves.

This consultation only considers regulation for decommissioning in the EEZ. It does not address decommissioning of structures or pipelines on land, in the coastal marine area or on the high seas. Effects in these areas are managed under other legislation, including the Maritime Transport Act 1994 and Resource Management Act 1991.

Submissions close at 5 pm on 21 September 2018.

Information on how to make a submission, including questions to guide your feedback, is included in section 7 of this document.

What are the Government's objectives?

The primary objective of the decommissioning regulations is to give confidence to the Government and the public that all offshore structures, installations and pipelines in the EEZ will be decommissioned in a way that meets the purpose of the EEZ Act and New Zealand's international obligations and, to give greater certainty to operators on how to comply with regulations.

These regulations are to ensure:

- processes are efficient and cost-effective, with the cost to the Government and operators proportionate to the level of environmental effects addressed
- the regulatory framework clearly provides for New Zealand's international obligations for decommissioning under relevant international conventions
- the process is clear and flexible, allowing for a case-by-case approach to consultation with relevant iwi and the public that is appropriate and fit for purpose.

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[2] Section 32 of the EEZ Act *Process for developing or amending regulations*.

[3] Refer to section 29E of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012.

Section 2: How proposed regulations will work with existing provisions

In this section, we give an overview of recent amendments to the EEZ Act regarding decommissioning.

This section provides relevant context for the sections that follow on the proposed policy for regulations.

What are the amendments to the EEZ Act?

The purpose of the EEZ Act is to promote the sustainable management of natural resources of the EEZ and continental shelf, and to protect the environment from pollution. The EEZ Act was amended through the Resource Legislation Amendment Act 2017 (in force from 1 June 2017) to address policy gaps identified in decommissioning oil and gas facilities. The EEZ Act was also amended to strengthen overall environmental regulation.

In relation to decommissioning plans, the amendments provided regulation-making powers to:

- prescribe the information that must be included in a decommissioning plan
- set out the process for the EPA to assess and accept the plan
- require the EPA to accept the plan subject to criteria prescribed in regulations.

The amendments also set out the requirements for public consultation in the form of written submissions on the plan.

Other amendments relating to decommissioning, more generally, included:

- a requirement that all future marine consent applications proposing to place a structure or pipeline on the seabed demonstrate a consideration of decommissioning
- the abandonment of a submarine pipeline being subject to a marine consent from the EPA
- making decommissioning-related marine consents non-notified discretionary
- making the EPA the decision-maker on all decommissioning-related marine consents to provide consistency between the plan and the later marine consents (instead of a board of inquiry).

Some of these amendments do not apply until the proposed decommissioning regulations come into force.

An explanation of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act) is provided in appendix 1 of this document.

What do the amendments mean?

Before an operator can apply for a marine consent to undertake decommissioning activities, it must have a decommissioning plan accepted by the EPA. The plan must set out what the operator intends to do with the installation and its associated structures and pipelines, following the end of petroleum production.

It is important that public consultation happens at the appropriate time (ie, early in the process, when different approaches to decommissioning are being considered). The EEZ Act requires the EPA to notify and receive submissions on the decommissioning plan as part of its

assessment of the plan. Acceptance of the decommissioning plan does not give the operator approval to carry out any activities and they will still need to apply for marine consents to implement the approach agreed in the plan.

See the diagram setting out the intended process for decommissioning plans in section 3 of this document.

To avoid duplicating public consultation, these applications will not be publicly notified. However, the applications must comply with the accepted decommissioning plan (ie, an operator cannot apply for a marine consent for a different purpose than what has been consulted on and accepted in the decommissioning plan).

Activities already given a marine consent under the EEZ would not need to be reconsidered as part of the decommissioning plan.

Why are decommissioning regulations needed?

The amendments to the EEZ Act for decommissioning don't apply until regulations setting out the detail for the overall process have been introduced. The regulations provide details and further clarification on how the process of developing and accepting a decommissioning plan would work. The regulations may also be supported by non-statutory guidance.

The proposed process is intended to provide for the development of an ongoing, iterative dialogue between relevant marine management agencies, the public and the operator to decide the approach for decommissioning (which is not provided for under the current marine consent process).

The Government also intends the proposed process to provide a clear and transparent process for how operators would approach decommissioning their offshore infrastructure. The process would provide greater certainty for the public, the Government and operators.

How does the decommissioning plan relate to the later marine consents?

The decommissioning plan would provide a consolidated, holistic view of activities needed to take place as part of a decommissioning work programme (and to guide what marine consent applications would be needed). It would describe the operator's intended approach to decommissioning, including what parts of the offshore installation, structures and pipelines would be dismantled and removed, and whether any parts would remain on the seabed.

As this step in the process is likely to occur some years before any decommissioning activities are carried out, the information in the decommissioning plan may contain certain assumptions and estimates.

The later marine consents would provide approval for the operator to do activities needed for decommissioning (as per the accepted plan) and would include a more detailed assessment of the environmental effects. The proposed carrying out of the activity must conform to the accepted decommissioning plan.

Table 1 sets out the basic differences between a decommissioning plan and the related non-notified marine consents.

Table 1: Summary of basic the decommissioning plan and the subsequent non-notified marine consent application

	Proposed two-step process with notified decommissioning plan and non-notified marine consent application	
Operator submits	Decommissioning plan	Marine consent application
Timing	Flexible, but usually 2–4 years before the end of production	Before operator does a decommissioning activity
Pre-lodgement engagement	Operator required to engage with relevant iwi and existing interests before submitting plan, to satisfy requirements for information to be included in the plan	No statutory requirement, although activity must be as per the accepted decommissioning plan
Regulator begins assessment	Information requirement as set out in proposed regulations	EPA must determine if the application is complete (as per section 38 criteria)
Public consultation	Plan is publicly notified by the EPA and it receives written submissions on the plan	Non-notified process – no public consultation
Consideration of effects	Requires assessment of plan against criteria proposed in regulations	Requires full assessment of effects against section 59 decision-making criteria
Decision	EPA accepts the plan or refuses to accept the plan	EPA grants marine consent or refuses the application
Conditions	The plan may describe any potential conditions for marine consents, but no conditions would be imposed on the plan itself	The EPA may impose conditions on the marine consent

Section 3: The Government's proposal

This section seeks public feedback on options being considered for the proposed policy for decommissioning, which is the focus of this public consultation. In this section, we outline:

- the overall policy position regarding a case-by-case consideration of abandoned material
- the activities that would be covered by a decommissioning plan
- the proposed information an operator must include in a decommissioning plan
- the proposed process for the EPA to deal with a decommissioning plan
- the proposed criteria the EPA would use to assess and accept a decommissioning plan.

Case-by-case approach to leaving material on the seabed

Given some installations (or parts thereof) were built at a time when little consideration was given to how they might be removed in the future, and given the range of different infrastructure types used offshore by the oil and gas industry, there is unlikely to be one decommissioning solution suitable for all, even within a single field. Therefore, the Government considers a case-by-case approach to the decommissioning of installations, structures and pipelines is needed.

Changes to the EEZ Act last year introduced 'decommissioning plans' as a tool for considering the approach to decommissioning projects.

In line with New Zealand's international obligations and the purpose of the EEZ Act to protect the environment from pollution, disused installations and structures must be removed from the seabed unless there are reasons for them to remain. If they are to remain, the decommissioning plan must include a comparative assessment[4]. You can read more about comparative assessments in section 3 of this document.

The decommissioning plan will be assessed on a case-by-case basis against proposed criteria and will be subject to meeting requirements to avoid, remedy or mitigate the anticipated future effects of any material left permanently behind on the seabed. The EEZ Act continues or enables the implementation of New Zealand's obligations under various international conventions relating to the marine environment.[5] The United Nations Convention on the Law of the Sea (UNCLOS) provides that States have a general obligation to protect and preserve the marine environment – and a more specific obligation to take all measures necessary to prevent, reduce and control pollution of the marine environment from any source. Article 60 of UNCLOS also states:

> "…any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization."

The 1989 *IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone* (*IMO Guidelines and Standards)* recommend standards to be followed by a coastal state when making decisions regarding decommissioning. These are not binding obligations, but reflect international best

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4 Comparative assessment is a commonly used tool in offshore decommissioning for assessing a range of available options against technical, environmental, social and fiscal considerations.

5 Section 11 of the EEZ Act International Obligations.

practice from the International Maritime Organisation (IMO). Under these guidelines, the general premise is that all disused installations and structures must be entirely removed, except when special circumstances (consistent with the IMO guidelines) are shown to apply.

IMO guidelines state there are several criteria for the coastal state to consider when determining whether to allow an offshore installation or structure, or part thereof, to remain on the seabed. These criteria include:

- consideration of the effects on safety
- marine environment
- cost
- technical feasibility
- risk of injury to personnel.

New Zealand is also a party to the London Convention on the Prevention of Marine Pollution by the Dumping of Wastes and Other Matter 1972 (the London Convention) and the subsequent 1996 London Protocol (the London Protocol). The London Protocol emphasises the need to protect the marine environment from all sources of pollution, and to promote the sustainable use and conservation of marine resources. Some decommissioning considerations are described in the *Platforms and Structures Assessment Guidelines under the London Convention and Protocol.*

Pipelines are excluded from the scope of the IMO guidelines and the London Protocol. It is also possible that the removal of a pipeline may create more environmental harm than leaving it in place (for example, if the pipeline is providing a habitat for threatened species). The Government therefore proposes that pipelines will always be considered on a case-by-case basis, to ensure sustainable management is achieved.

See more about New Zealand's international obligations in appendix 2 of this document.

Marine consent for dumping

Under the London Protocol, to which New Zealand is a party, dumping of all waste at sea is prohibited, except for certain types subject to a permit granted by the coastal state. While pipelines are excluded from the scope of the London Protocol, the abandonment of platforms (or other man-made structures) at site, and the disposal into the sea of platforms, structures and other matter are considered 'dumping'.

The EPA must not grant a marine consent for dumping (abandon or leave behind) of any material, if it considers there may be opportunities to reuse, recycle or treat the material without causing more than minor effects on human health or the environment, or without imposing unreasonable costs.

To achieve the purpose of the EEZ Act, decision-makers must also take into account specified decision-making criteria and apply information principles. The EPA must consider any effects on the environment and existing interests (including any future effects) when considering an application for a marine consent.[6] The EPA is also required to apply information principles in making decisions. If information is uncertain or inadequate, the EPA must favour caution and environmental protection. As the effects of removing a structure are likely to be more immediate and certain than the potential long-term effects of leaving material permanently on

[6] Section 6 of the EEZ Act Meaning of Effect.

the seabed, we consider complete removal is more likely to avoid, remedy or mitigate adverse effects and to protect the environment from pollution.

Scope of a decommissioning plan

There is no specific definition for decommissioning in the interpretation section of the EEZ Act, but there are provisions describing activities that need to be covered by an accepted decommissioning plan before an operator may apply for marine consent (see below).

The Government is considering options on whether these proposed regulations would elaborate further.

What does the EEZ Act say about activities covered by a plan?

Section 100A(1) of the EEZ Act states that:

The owner or operator of an offshore installation used in connection with petroleum production, or a structure, submarine pipeline, or submarine cable associated with such an installation, may submit a decommissioning plan to the Environmental Protection Authority for acceptance.

Section 38(3) of the EEZ Act states:

If the [marine consent] *application relates to an activity that is to be undertaken in connection with the decommissioning of an offshore installation used in connection with petroleum production, or a structure, submarine pipeline, or submarine cable associated with such an installation,—*

(a) the application must include an accepted decommissioning plan that covers the activity; and

(b) the proposed carrying out of the activity must be in accordance with that plan.

An operator may decide to submit separate decommissioning plans for different installations in different parts of a field, or it may submit a decommissioning plan covering all installations, associated structures and pipelines in a field.

Timeframe for decommissioning plans

These proposed regulations would not set out when an operator must submit a decommissioning plan to the EPA – it would be up to the operator to determine when the appropriate time is to submit a plan, based on when it expects to cease production and enter the decommissioning phase. In other jurisdictions with similar requirements (eg, the UK and Thailand), decommissioning plans are usually submitted two to four years before the end of production. The Government considers some flexibility is needed to allow for unusual circumstances or external factors such as changes to oil and gas prices. However, guidance could be developed to assist stakeholders in considering when to submit a decommissioning plan.

What are decommissioning-related activities?

The Government is not proposing to set out a list of the activities that would be done regarding the decommissioning of an offshore installation. This is because the process needs flexibility to take account of different installations and changing technologies. There are also some activities (such as the plugging and abandonment of wells) which may be desirable to progress ahead of an accepted decommissioning plan.

However, the Government's intention is the meaning of decommissioning (in the context of section 38(3)) would capture everything that must be done to an offshore petroleum installation and its associated structures and pipelines, to take them permanently out-of-service after the installation is no longer used for petroleum production.

This would include preparatory activities which are restricted under the EEZ Act, such as:

- disturbance to the seabed (for eg, associated with anchoring vessels)
- discharges to sea (for eg, associated with cleaning of topsides and flushing of pipelines)
- deposit of material (for eg, associated with permanently plugging a well).

The final abandonment, dumping or removal of the installation and its associated structures and pipelines are also decommissioning-related activities.

QUESTION

1. Do you agree with the Government's proposal not to specifically list the activities within the proposed regulations for which section 38(3) applies?

Plugging and abandonment of wells

Under the Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 2013 (PEE Regulations), operators are required to permanently plug and abandon wells no longer in use. Wells pose a high risk to the environment and human health and safety. For these reasons, wells should be plugged and abandoned as soon as possible after they are no longer being used to extract petroleum. This usually involves putting cement plugs down the well to prevent any fluids escaping in the future, cutting the casing (the lining of the well) so that it does not protrude above the seabed, and removing the well head and any other related subsea equipment. In addition to the standards and requirements set out in the PEE Regulations, these activities may require a marine consent from the EPA.

Operators may wish to plug and abandon non-productive wells ahead of the decommissioning stage, especially if other installations and parts of the field are still operational. These regulations will not hinder the operators' ability to plug and abandon the well at their earliest convenience. Any wells not plugged and abandoned as part of field management must be captured in decommissioning plans, to ensure they are not overlooked.

Information required for a decommissioning plan

Section 100A(2)(d) of the EEZ Act sets out basic requirements for what must be included in a decommissioning plan.

What does the EEZ Act say about the information needed?

Section 29E(1)(a) of the EEZ Act says that regulations may prescribe *information that must be included in a decommissioning plan under section 100A(2).*

Section 100A(2) of the Act requires a decommissioning plan must—

(a) identify the offshore installations, structures, submarine pipelines, and submarine cables that are to be decommissioned; and

(b) fully describe how they are to be decommissioned; and

(c) if it is a revised decommissioning plan referred to in section 100C, identify the changes from the accepted decommissioning plan that it is intended to replace; and

(d) include any other information required by the regulations.

Section 100A(3) of the Act says—

The regulations may elaborate on what information is required to be included in the plan under subsection (2)(a) to (c).

The proposed regulations would elaborate on this further to ensure that all decommissioning plans include basic information to assist the public to understand the proposed approach.

Basic information required in a decommissioning plan:

- a description of the existing environment
- a description of the material (installations, structures and pipelines) to be decommissioned, including the amount, type, location, depth, size, stability, age and condition of the material.

Proposed approach to decommissioning:

- description of the preferred approach (which should be the best practicable environmental outcome)
  - description of the anticipated method for decommissioning of material
  - description how the site will be prepared for decommissioning
  - information on re-use, recycling, treating of items or disposal by other means to be decommissioned. This should be informed by seeking advice from the relevant local authorities with responsibilities for managing waste. Information should be included to confirm appropriate facilities exist to deal with any waste generated.

Schedule:

- indication of the likely timescale for undertaking the proposed option, including when various stages of the decommissioning are expected to start and finish.

Post-decommissioning monitoring and maintenance:

- a description of the proposals for post-decommissioning monitoring and maintenance including seabed sampling surveys to monitor levels of hydrocarbons, heavy metals and other contaminants in sediments and biota
- an indication of monitoring timeframes and how results will be reported
- where material is to be dumped or abandoned, a description of the anticipated inspection and maintenance programme
- a description of any engagement activities to be undertaken during and post-decommissioning.

Appendices:

- comparative assessment.

Comparative assessments

In addition to the information set out in section 100A(2)(d) of the EEZ Act, the Government proposes to require operators to include a comparative assessment with the decommissioning plan. This would be for any installations (or parts of installations) that an operator seeks to abandon and for all pipelines, irrespective of the preferred decommissioning approach.

Comparative assessment is a commonly used tool in offshore decommissioning and in other sectors, for assessing available options against the full range of contributory factors in selecting the preferred approach. Comparative assessment can support understanding of the complex relationships between factors and provide a transparent ranking of alternatives.

A marine consent from the EPA is still required to dump structures, installations or pipelines in the EEZ. The EEZ Act states the EPA must refuse a marine consent application to dump a structure or other waste, if it considers the material may be reused, recycled or treated without more than minor effects on human health or the environment or without imposing unreasonable costs on the applicant. Therefore, as part of the subsequent marine consent, applicants will need to give the EPA information about any alternatives to dumping (and the costs and risks associated with those alternatives).

To ensure consistency between the information required in a decommissioning plan and matters the EPA considers for a marine dumping consent, the Government proposes the 'practical availability of other means of disposal' would be considered in the decommissioning plan through a comparative assessment.

A comparative assessment is not required if the operator is seeking to remove its installations, as this is consistent with the purpose of the Act to protect the environment from pollution and international best practice (as described in section 1 of this document), to avoid, remedy of mitigate adverse effects and to protect the environment from pollution. The subsequent decommissioning-related marine consents would manage any effects on the environment and existing interests arising from the removal of installations and structures.

The Government proposes a comparative assessment would be required for pipelines, irrespective of the preferred decommissioning approach. This is because effects associated with removing or abandoning a pipeline are likely to differ from those associated with installations and structures. Also, leaving a pipeline in place (particularly if it is buried, flushed and cleaned) is less likely to pose risks to navigation or have adverse effects on existing interests. This approach is consistent with international practice where there appears to be a greater allowance for leaving pipelines in place (than other structures). In these cases there are requirements for cleaning and capping of the pipeline and assessment of the long-term effects.

Where dumping or abandonment of an installation or structure is the proposed approach (or the relevant plan concerns a pipeline), a decommissioning plan would be required to include a comparative assessment (using good practice methodology) that systematically identifies and assesses all available options, and ranks them demonstrating the best practicable environmental option, taking account of environmental, technical (including safety), societal, cultural and economic factors, which include:

- any potential impact on cultural values
- the potential effect on the safety of surface or subsurface navigation or existing interests
- the potential effect, including cumulative and future effects, on the marine environment, including:

  - the rate of deterioration of any material left on the seabed and its present and possible future effects on the environment
  - the risk of material shifting from its position in the future
- potential effects on human health
- the cost and technical feasibility including:
  - identification of practical limitations of disposal alternatives
  - analysis of the cost of reuse, recycling or disposal alternatives, and any potential ongoing management and monitoring necessary to ensure the protection of the environment and human health
- exclusion of future uses
- determination of a new use or other reasonable justification to dump or abandon the installation or structure or parts thereof
- opportunities for off-site recycling
- destruction of hazardous constituents
- treatment to reduce or remove the hazardous constituents.

Good practice methodology for a comparative assessment would be a process that:

- accounts for the full range of environmental, cultural, technical (including safety) and economic factors
- provides a robust and transparent evaluation of all available options
- clearly demonstrates how the decision on the preferred option has been reached
- is carried out involving appropriate engagement with the public, relevant iwi, and existing interests
- is consistent with any guidance issued in support of these regulations.

If adequate information is not available to determine the likely effects of dumping or abandonment, it should not be considered further as an option.

The operator would identify the preferred approach or 'best' option for its structures and pipelines, through its comparative assessment. The preferred approach would be the option delivering the most benefit to (or the least adverse impact on) the environment at a reasonable cost, in the long and the short term. In other jurisdictions, this is often referred to as the 'best practicable environment option' (BPEO). Options typically include:

- complete removal to land
- partial removal to land
- abandonment in-situ
- disposal at sea (dumping).

The preferred option may represent one option, or a combination of options. What is considered 'practicable' would depend on the circumstances associated with the cost and technical feasibility of available options. Certain options may present significant health and safety risks. These risks should be considered when considering the technical feasibility of an option.

QUESTIONS

2. Do you agree with the information requirements for a decommissioning plan? If not, what do you think should be required in a decommissioning plan?
3. Do you agree a comparative assessment is an appropriate methodology to present the available options for dealing with structures to be decommissioned?
4. Do you agree a comparative assessment should only be required if an operator seeks to dump or abandon an installation, or parts thereof? If not, why not?
5. Do you agree a comparative assessment should be required for pipelines, regardless of whether the operator seeks to abandon or remove the pipeline? If not, why not?
6. Do you think it would be useful if there was a standard template for decommissioning plans? If not, why not?

Dealing with a decommissioning plan

The EEZ Act sets out high-level requirements for the decommissioning plan process.

What does the EEZ Act say about the process?

Section 29E(1)(b) of the EEZ Act says regulations may prescribe—

the process for dealing with a decommissioning plan under section 100B(1)(a).

Section 100B(1) of the EEZ Act as amended requires—

When a decommissioning plan is submitted, the Environmental Protection Authority must—

(a) deal with the plan in accordance with the process prescribed by the regulations; and

(b) assess the plan against the criteria prescribed by the regulations.

Section 100D(1) of the EEZ Act says—

Regulations made for the purposes of section 100B must provide for public consultation in relation to a decommissioning plan that has been submitted for acceptance.

Section 100D(3) of the EEZ Act sets out what the regulations must provide for regarding public consultation for the decommissioning plan—

Regulations are to be regarded as providing for public consultation in relation to a plan if the regulations—

(a) require the EPA to publicly notify the plan; and

(b) allow any person who wishes to make a submission about the plan a reasonable opportunity to do so; and

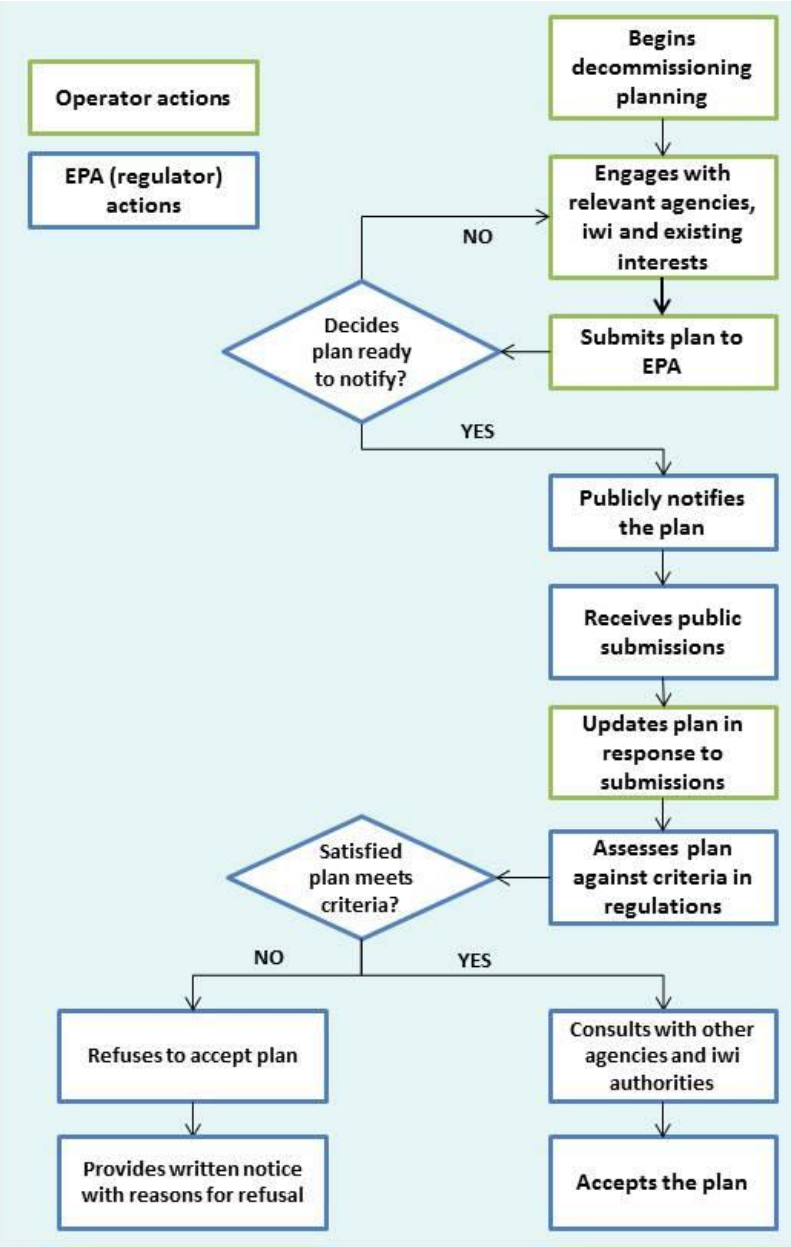
(c) require the owner or operator of the offshore installation, structure, submarine pipeline, or submarine cable to consider each submission and either—

(i) amend the plan in response to the submission; or

(ii) explain to the EPA why it does not propose to amend the plan in response to the submission.

Figure 1 shows the overall proposed process for assessing and accepting decommission plans.

Figure 1: Process diagram for dealing with a decommissioning plan



Early engagement and public consultation

The Government's intention with the introduction of decommissioning plans is to incentivise engagement between operators and marine management agencies, iwi and the public to agree the best overall approach to decommissioning. By undertaking engagement early and throughout the development of the plan it is more likely that issues can be identified and resolved before the formal public consultation process. Operators should identify relevant marine management agencies, relevant iwi and existing interests, whose views will inform the comparative assessment included in the plan.

The engagement process should be an ongoing, iterative dialogue between the operator or owner of the plan and other parties, identifying and resolving potential issues as far as is reasonably practicable before submission of the decommissioning plan to the EPA.

The Government proposes the following is included in all plans submitted to the EPA (to ensure the desired engagement is carried out and matters raised are addressed in a transparent manner).

Engagement and consultation

A description of the engagement carried out, which must include:

- identifying the relevant marine management agencies, relevant iwi and existing interests
- providing information to those identified on options for the plan
- seeking views from those identified, and considering those views in any comparative assessment (if available)
- demonstrating the extent to which matters raised have been considered in the plan submitted to the EPA.

Following formal public consultation, the operator must provide the EPA with a written response addressing the extent to which matters raised in submissions have been considered in the amended decommissioning plan. Alternatively, the operator must explain to the EPA why it does not propose to amend the plan in response to the submission.

The following documents provide useful guidance for operators about how to engage with stakeholders and iwi.

- Guidelines on Stakeholder Engagement during Decommissioning Activities (Oil and Gas UK, 2013).
- Best Practice Guidelines for Engagement with Māori (Te Runanga o Ngāti Ruanui Trust, 2014).

Both documents recommend starting engagement as early as possible, to understand what aspirations, issues and concerns people have. Operators should think about the most efficient and inexpensive way to involve stakeholders, the public and iwi in the engagement process.

Notifying the plan

Once a decommissioning plan has been submitted and is considered by the EPA to contain all the information set out in regulations, the EPA would publish the plan, or the relevant parts thereof, on its website and give public notice[7] of the plan. We do not propose to impose a requirement on the EPA to directly notify existing interests.

The EPA would ensure the document is appropriate for public consultation. The Government is proposing that as a minimum, the EPA checks the document contains the information prescribed by regulations, including whether adequate engagement with the relevant marine management agencies, iwi and existing interests has been undertaken by the operator. Options for when the EPA could notify a plan are set out below.

[7] Under section 7A of the EEZ Act, public notice means publishing a notice on the EPA website and publishing a summary of the notice in newspapers circulating in Auckland, Wellington, Christchurch, Dunedin and the region adjacent to the area that is the subject of the matter to which the notice relates.

1. Following an administrative check of the plan

The EPA may publicly notify a decommissioning plan when it is satisfied:

- the plan contains the information prescribed by regulations
- the operator has made a reasonable effort to engage with relevant marine management agencies, relevant iwi and existing interests.

2. Following a limited assessment of the adequacy of the plan

The EPA could undertake a limited assessment of the plan and continue to work with the applicant before publishing, but would not assess the plan against the complete criteria until after public consultation.

The EPA may publicly notify a decommissioning plan when it is satisfied the information prescribed by regulations has been provided in sufficient detail; meaning the information provided:

- is proportionate to the potential impact of the proposed approach on the environment and existing interests
- enables the EPA and the public to understand the nature of the activity and make informed submissions on the proposal.

3. Following a full assessment against the proposed criteria

Alternatively, the EPA could carry out its complete assessment of the plan against the proposed acceptance criteria before public consultation. However, it would not finalise its decision until after public submissions are received and an amended plan provided.

Public consultation and submissions on the plan

The Government proposes to allow the EPA to set the timeframe for public submissions when it notifies the plan. The period set would depend on what is proposed and the complexity of the plan, however, it is proposed that the timeframe must be at least 30 working days. This is the same as the time allowed for a notified marine consent. For example, a plan proposing to remove all installations and pipelines is unlikely to be as complex as a plan that proposes to abandon structures, as it will not require a comparative assessment.

The Government proposes the full decommissioning plan is made publicly available, as well as the public submissions received. Provisions in the EEZ Act allow the EPA to withhold information it considers is necessary in some circumstances. Those provisions for the protection of sensitive information are limited to 'proceedings' (such as a trial, a hearing or an appeal) and would not apply to the proposed regulations.[8]

[8] Section 158(1) of the EEZ Act: The Environmental Protection Authority may, on its own initiative or on the application of any party to any proceedings or class of proceedings, give a direction described in subsection (3) where it is satisfied that the order is necessary—

The operator must update the decommissioning plan after public submissions are received, setting out how any issues not previously raised through the engagement process have been considered in the design of the decommissioning approach, or explain why the plan has not been updated in response to submissions.

This would allow operators the opportunity to amend their approach, where possible, to address submitters' concerns – and provides the EPA with additional information about how issues have been considered.

The EPA has broad powers under the EEZ Act that are 'reasonably necessary' to enable it to carry out its functions. This means the EPA can ask for further information or advice from any person(s) on any matter set out in these proposed regulations. We propose this could occur at any point during the process before the EPA accepts the plan.

The Government is not proposing to require a hearing as part of the public consultation process. The EPA's acceptance or otherwise of a decommissioning plan is not an approval for the operator to undertake work. However, the EPA has general powers to do what is reasonably necessary to carry out its functions, therefore the EPA may hold meetings with submitters if it considered this was appropriate. The purpose of any meeting would to be to clarify the information provided in written submissions. It would not grant additional rights to those submitters.

The Government proposes the EPA be required to consult with other relevant marine management agencies and iwi authorities as necessary throughout the process, and before determining whether to accept a plan or not. Other relevant agencies are likely to include:

- the relevant regional council
- WorkSafe New Zealand
- Maritime New Zealand
- Department of Conservation
- Ministry for Primary Industries
- Ministry of Business, Innovation and Employment.

The relevant iwi authorities would depend on the region adjacent to where the decommissioning activities are taking place.

EPA to recover costs

The EEZ Act provides for the EPA to recover costs incurred from performing its functions and providing services under the Act. The EPA's costs relating to dealing with a decommissioning plan should be cost recoverable from the person who submits a decommissioning plan. These charges are needed for the EPA to carry out its functions.

The Government is proposing to amend the Exclusive Economic Zone and Continental Shelf (Fees and Charges) Regulations 2013 to specifically provide for recovery of the costs of dealing with and assessing decommissioning plans. This would be consistent with the purpose of the Act, as it enables the EPA to carry out its regulatory functions to promote sustainable development and protect the environment from pollution.

(a) to avoid causing serious offence to tikanga Māori or to avoid disclosing the location of wāhi tapu; or

(b) to avoid disclosing a trade secret or to avoid causing unreasonable prejudice to the commercial position of the person who supplied, or is the subject of, the information.

QUESTIONS

7. Do you agree with the information required to describe the engagement and consultation carried out by an operator on a decommissioning plan?
8. Before the EPA publishes a decommissioning plan for public notification, should it be required to undertake (1) an administrative check that the plan contains the information prescribed by regulations (2) a limited but evaluative assessment of the adequacy of the information or (3) a full assessment against the set of criteria prescribed in regulations?
9. What is your experience of submitting on notified marine consent applications and do you consider the quality of information was adequate to make an informed submission?
10. Are you aware of any parts of a decommissioning plan that are unlikely to be appropriate or relevant for public notification? Are there any matters you consider should be withheld?
11. Do you agree with the minimum timeframe for submissions? If not, why not?
12. Do you think these proposed regulations should specify a list of the parties (referred to above) that the EPA must consult or seek advice from prior to making a decision?
13. Do you agree the EPA should be able to request further information on a decommissioning plan at any stage of the process to enable it to carry out its functions?
14. Do you agree the EPA should recover costs relating to decommissioning plans from the person who submits a decommissioning plan?

Applying for decommissioning-related marine consents

When the EPA receives an application for a marine consent, and determines the activities included in the application are connected with decommissioning, then the activities must be in accordance with the accepted decommissioning plan. For example, if a decommissioning plan sets out an operator will remove all the pipelines associated with its offshore petroleum installation, the operator cannot then apply for a marine consent to abandon those pipelines, as this would not conform to the accepted plan. In such cases, an operator would need to amend its decommissioning plan to reflect its new approach to decommissioning the pipelines. This amendment would also be subject to public consultation, if the EPA considers the effects of the change to be materially different (see Changes to a plan).

Changes to a plan

The EEZ Act sets out high-level requirements for changing a decommissioning plan.

What does the EEZ Act say about changing a plan?

Section 100C(1) of the EEZ Act sets out—

If the owner or operator of an offshore installation, structure, submarine pipeline, or submarine cable wishes to amend the accepted decommissioning plan (the current plan), it may submit a revised decommissioning plan to the Environmental Protection Authority under section 100A.

Section 100D(2) sets out what regulations may provide for in relation to public consultation where the EPA has received a revised plan—

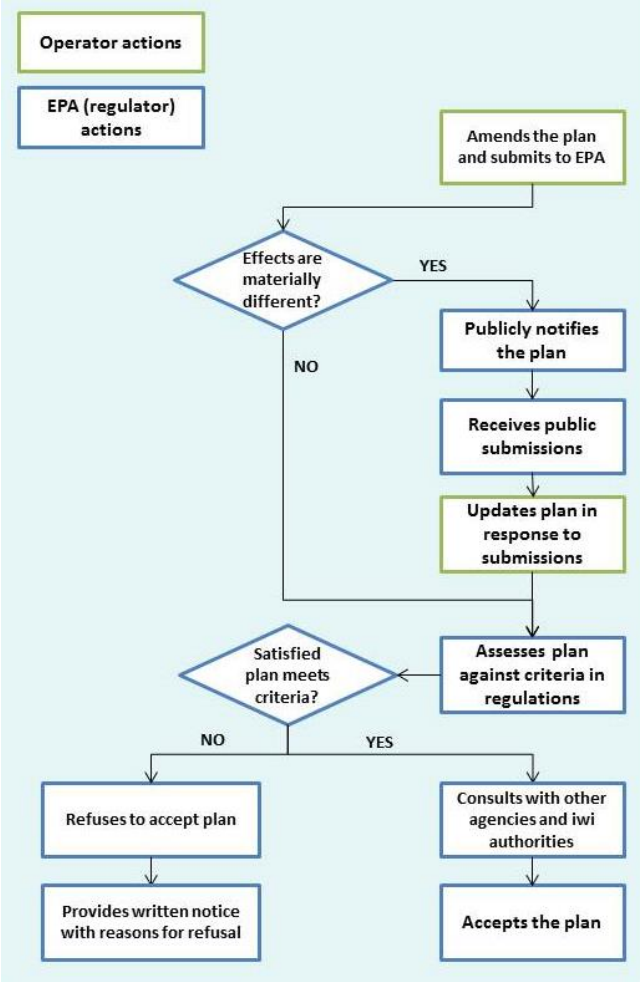
Regulations may provide for either or both of the following:

(a) that public consultation is required only in relation to the changes from the current plan (as defined in section 100C) to the revised plan

(b) that public consultation is not required if the EPA is satisfied that the effect on the environment and existing interests of implementing the revised decommissioning plan would not be materially different from, or would be less than, the effect of implementing the current plan.

Figure 2 sets out the process specified in the EEZ Act for an operator to amend a plan.

Figure 2: Process to amend a decommissioning plan



The Government proposes to provide for both (a) and (b) of section 100D(2). This recognises there are likely to be minor changes to a plan not resulting in effects greater or materially different than those previously considered and subjected to public consultation. It would not provide any further direction on how the EPA might determine whether public consultation is needed for changes to a plan.

QUESTIONS

15. Do you agree these proposed regulations should provide for both (a) and (b) in section 100D(2) of EEZ Act?
16. Do you agree the EPA should be able to decide if public consultation on changes to a plan is necessary? If not, why not?

Criteria for accepting a plan

The EEZ Act describes that the EPA will assess decommissioning plans against criteria to be set out in regulations.

What does the EEZ Act say about criteria?

Section 29E(1)(c) provides the regulations may prescribe—

the criteria against which a decommissioning plan must be assessed under section 100B(1)(b).

Section 100B sets out how the EPA must assess and accept a decommissioning plan-

When a decommissioning plan is submitted, the Environmental Protection Authority must—

(a) deal with the plan in accordance with the process prescribed by the regulations; and

(b) assess the plan against the criteria prescribed by the regulations.

Having assessed the plan, the EPA must,—

(a) if it is satisfied that the plan meets those criteria, accept the plan as the accepted decommissioning plan for the installations, structures, pipelines, and cables to which it relates; or

(b) otherwise, refuse to accept the plan.

To avoid doubt, the EPA may refuse to accept a plan if it considers that it does not have adequate information to determine whether it meets the criteria.

The EPA must give to the owner or operator—

(a) written notice of its decision under subsection (2); and

(b) if it refuses to accept the plan, written reasons for that decision.

The Government's proposed criteria are informed by the matters set out in the *1989 IMO Guidelines and Standards,* and the *Platforms and Structures Assessment Guidelines under the London Convention and Protocol*. While neither of these guidelines directly relate to the removal or abandonment of pipelines, the Government proposes to apply the same criteria to pipelines as it applies to installations and structures.

For the EPA to accept a decommissioning plan, the Government proposes the following criteria.

- A decommissioning plan must contain all information set out in regulations, and adequately describe how matters raised during engagement and public consultation have been considered.
- Where the proposed or preferred approach in a decommissioning plan is to dump or abandon in-situ material (structures, installations or pipelines), the EPA may only accept the plan if it considers:
  - the abandonment in-situ or dumping of the material complies with New Zealand's international obligations with respect to the dumping of waste
  - the abandonment in-situ or dumping of the material will not cause unjustifiable interference with existing interests
  - the abandonment in-situ or dumping of the material results in the best practicable environmental outcome
  - entire removal is not technically feasible or would involve an unreasonable cost
  - there are no other opportunities to re-use, recycle or treat the material, without undue risks to human health or the environment or disproportionate costs.

The best practicable environmental option will be identified by the comparative assessment and will result in the best outcome for the environment, consider the impact on cultural values and existing interests and be technically feasible (without imposing an unreasonable cost).

Any installations, or parts thereof, that are allowed to remain should meet the following requirements:

- Installations that project above the surface of the sea must be adequately maintained to prevent structural failure
- There must be an unobstructed water column above any partially removed installations or structures, of sufficient depth to ensure safety of navigation, but not less than 55 metres
- The materials will remain in the same location on the seabed and not move under the influence of waves, tides, currents, storms or other foreseeable natural causes (so as not to cause a hazard to navigation).

The IMO Guidelines and Standards include consideration of the risk of injury to personnel from removing installations and structures. The criteria the Government is proposing do not explicitly include this. However, it is expected safety considerations would be captured when an operator is evaluating the cost and technical feasibility of decommissioning options through its comparative assessment (these regulations would not replace the requirements under the Health and Safety at Work Act 2015).

Given decommissioning plans are expected to be developed well in advance of operators applying for and undertaking decommissioning activities, some of the information in a plan may be uncertain. However, this does not preclude the EPA from accepting a plan, if it has adequate information to determine whether it meets the criteria.

The subsequent decommissioning-related marine consents would manage the effects on the environment and existing interests of the decommissioning approach accepted in the plan.

QUESTIONS

17. Do you agree the same criteria can be applied to pipelines as applied to installations and structures (as above)? If not, why not?
18. Do you agree with the criteria proposed? If not, what criteria do you think should be considered for accepting a decommissioning plan?
19. Do you agree a case-by-case approach should be taken to determine how installations, structures and pipelines should be dealt with?

Section 4: What is not in scope of these regulations?

This section gives an overview of the wider regulatory framework for decommissioning, outlines what would not be included in decommissioning regulations under the EEZ Act and informs submissions.

An overview of the regulatory framework

The decommissioning regulations under the EEZ Act would form part of the wider regulatory framework for managing decommissioning. They would specifically manage effects on the environment and existing interests from decommissioning activities in the EEZ. There are several other statutes with implications for the responsibilities of other government agencies involved in managing decommissioning activities. The agencies involved and the legislation they administer are shown in the figure below. A detailed overview of the regulatory framework is provided in appendix 3 of this document.

Figure 3: Government agencies involved in managing decommissioning activities, and the legislation they administer

Financial assurance

These regulations would not require operators to provide evidence of financial assurance as part of the decommissioning plan.

The costs to decommission offshore oil and gas production facilities can be hundreds of millions of dollars. The Crown Minerals Act (CMA) is the only regime that currently considers the financial capability of operators as part of its permit process. A company's financial and technical capability is assessed by the Crown when applying for a petroleum permit to ensure they can carry out the proposed work programme in the permit. Where an asset is sold, the purchasing company's financial and technical capability is also assessed. The EEZ Act does not assess an asset owner's financial capability to carry out decommissioning.

The EEZ Act allows the EPA to impose a condition on a marine consent, requiring the consent holder to provide a bond for the performance of any one or more of the conditions of the consent. However, this can only be required when a marine consent is applied for and granted (the EPA cannot require anyone to apply for a marine consent). This means that a bond for decommissioning cannot be secured under the EEZ Act until an operator applies for a marine consent. While this is likely to be too late in the process to provide financial assurance (ie, to demonstrate that an operator has sufficient funds to undertake decommissioning), the EPA would be able to require a bond for the performance of a condition related to decommissioning. For example, a bond could be required to ensure monitoring of any structures that are allowed to be left on the seabed.

The EPA has a range of enforcement options if activities (including abandonment) are done unlawfully, including the ability to recover expenses. The maximum penalty for a natural person convicted of breaching the EEZ Act is $300,000 and $10 million for a person other than a natural person (which falls short of estimated costs for decommissioning in New Zealand).[9]

Ownership of infrastructure

The EEZ Act does not assign ownership of abandoned infrastructure. It regulates the effects on the environment and existing interests from a specific list of activities. When determining whether any material would be allowed to remain on the seabed, the EPA would consider potential future effects on the environment or existing interests and how these may be avoided, remedied or mitigated. It can also impose a bond for the performance of any condition related to abandoned infrastructure. However, the EPA cannot grant consent for occupation of space. Therefore, responsibilities associated with ownership of abandoned installations, structures or pipelines once a consent expires or a bond is refunded are out of scope of these proposed regulations and are not being considered as part of this consultation.

New use of a structure or pipeline

While any potential re-use of a structure for a new purpose such as offshore aquaculture, tourism or the establishment of a reef may be a consideration for the decommissioning plan, the relevant installations, structures and pipelines would still need to be decommissioned at the end of their productive life. A new use would not be considered a decommissioning-related activity, so would still require marine consent (following the standard process) for any relevant restricted activity.

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9 www.parliament.nz/en/pb/hansard-debates/rhr/document/HansS_20170321_053700000/12-offshore-oil-and-gas-rigs-decommissioning-cost.

In practice, the environmental context of New Zealand's existing offshore structures in the EEZ is not well suited to the creation of productive artificial reefs due to water depths and temperatures.

The United States has developed a 'rigs-to-reefs' programme, allowing oil and gas platforms to remain on the seabed as an artificial reef. In these cases, the owner of the platform is asked to contribute to the state's artificial reef programme fund, a sum of half the savings realised by not having to remove the platform to shore. In this case, the state agency responsible for managing marine fisheries resources must accept liability for the structure, before the relevant authority releases the owner from obligations under its lease.

Development of a 'rigs-to-reefs' programme for New Zealand is not within the scope of these regulations.

Decommissioning of oil and gas infrastructure in the coastal marine area and on land

These regulations will not apply to decommissioning of installations, structures and pipelines in the territorial sea or on land. As shown in appendix 4, figure 2 (map of five offshore production fields currently producing), Pohokura sits completely within the territorial sea, and the Maui and Kupe installations have pipelines crossing the territorial sea from the EEZ onto land. Activities relating to the decommissioning of these facilities in the coastal marine area (within the territorial sea) and on land are primarily managed under the Resource Management Act 1991 (RMA).

In the Taranaki region, decommissioning activities in the coastal marine area will be regulated through its Regional Coastal Plan (RCP), prepared under the RMA. This will also be the case in other regions for any future facilities.

The RCP governs the use, development and protection of the Coastal Marine Area. It helps a regional council, in conjunction with the Minister of Conservation, to achieve sustainable management for the coastal marine area. A RCP must give effect to any national policy statement, any coastal policy statement, any national planning standard and any regional policy statement in New Zealand. Rules in the RCP have the force and effect of regulations and are legally binding. The rules determine whether an application for a consent is needed to carry out an activity.

Where there are facilities sitting across the boundary between the EEZ and the territorial sea, the operator may choose when to apply for the various marine consents it needs to carry out decommissioning activities.

While the proposed regulations will not apply to the coastal marine area, we consider non-statutory guidance on how the two regulatory regimes would work together will help operators in deciding the best approach.

QUESTION

20. Do you think guidance would be helpful for industry and the public to understand how decommissioning would work under the EEZ Act and RMA?

Section 5: Statutory requirements for proposing regulations

Purpose of the EEZ Act

The Government's view is these proposed regulations would be consistent with the purpose of the Act because:

- they promote protection of the environment from pollution, by requiring justification to leave installations and structures on the seabed
- they contribute to safeguarding the life-supporting capacity of the environment, by ensuring owners of offshore installations consider environmental effects in developing a decommissioning plan and in any applications for marine consents for decommissioning activities
- they require public consultation on the best approach to decommissioning, supporting the potential of natural resources to be sustained to meet the reasonably foreseeable needs of future generations
- they specify decision-making criteria, reflecting New Zealand's international obligations for accepting the plan
- marine consents would still be required for decommissioning-related activities and the EPA can set conditions it considers appropriate to avoid, remedy or mitigate any adverse effects for each consent it grants
- the EEZ Act does not operate in isolation, and several other regulatory regimes reinforce the requirements on operators to operate safely and minimise the likelihood of significant adverse effects
- they provide for economic well-being, by ensuring decommissioning plans consider their impact on existing interests and future uses of the marine environment
- they promote sustainable management, by requiring operators to select the option for decommissioning that delivers the most benefit to (or the least adverse impact on) the environment at a reasonable cost, in the long and short term.

Best available information

When developing regulations, the Minister must:[10]

- make full use of the information and other resources available to them
- base decisions on the best available information
- take into account any uncertainty or inadequacy in the information available.

If, in relation to making a decision under this Act, the information available is uncertain or inadequate, the Minister must favour caution and environmental protection.

In formulating policy proposals, Ministry for the Environment (the Ministry) officials collaborated with government agencies and other stakeholders to gather the best available

[10] Section 34 of the EEZ Act.

information. Officials have also reviewed how other jurisdictions regulate the decommissioning of oil and gas installations (appendix 5 of this document).

The information gathered through this consultation will also contribute to the evidence base for these proposed regulations.

Under the Sustainable Seas Challenge, research is being done on the potential options for reusing oil and gas structures as part of decommissioning. This information was not available at the time of releasing this discussion document, but once available it will be considered as part of the development of these regulations.

Section 6: How would these proposed regulations be implemented?

Timeframe for implementation

Following consultation, officials from Ministry for the Environment will analyse submissions and provide advice to the Government, who will then decide whether to proceed with these proposals or revise them. If the Government decides to proceed, we anticipate regulations would be made in 2019.

Cost of implementing the proposed regulations

The EPA will primarily be responsible for the direct implementation of the process proposed for regulations. The EPA will face administrative costs resulting from these proposals, which will mainly be recovered from the operator.

The process is new, so costs can only be estimated at this stage. Costs may range from approximately $200,000 to $500,000 to assess and accept a decommissioning plan. These are based on indicative fees charged in the UK[11] for assessing decommissioning plans for a range of different facilities. These costs reflect fixed fees determined by the complexity of the project. It costs around $100,000 to $450,000 for the EPA to process non-notified discretionary marine consents.

This compares with estimated costs for a notified marine consent for a discretionary activity, which may be between $250,000 and $1,500,000 per application. Multiple marine consent applications may be submitted for an accepted decommissioning plan.

There are not likely to be any significant monitoring and reporting costs for decommissioning plans, as monitoring and reporting will occur because of the marine consent process. The requirement for decommissioning plans is expected to improve the efficiency of the later marine consent process for operators and the EPA as the regulator.

Monitoring and evaluation of the proposed regulations

Any functions relating to decommissioning would be monitored, evaluated and reviewed as part of the wider EEZ Act framework. It will not be monitored in isolation. The Ministry will carry out any monitoring, evaluation or review as the responsible agency, which may include:

- evaluation of costs and the effectiveness of all EEZ functions, including those for decommissioning activities
- evaluation of how effective the EPA and other management agencies are in meeting the purpose of the Act.

11 www.gov.uk/government/uploads/system/uploads/attachment_data/file/43418/5796-decomm-fees.pdf.

Section 7: Consultation process

How to make a submission

The Government welcomes your feedback on this discussion document. The questions posed throughout this document are summarised below. They are a guide only and all comments are welcome. You do not have to answer all the questions.

To ensure your point of view is clearly understood, you should explain your rationale and provide supporting evidence where appropriate.

You can make a submission in three ways:

- use our online submission tool, available at http://www.mfe.govt.nz/have-your-say-decommissioning-offshore-oil-and-gas
- download a copy of the submission form to complete and return to us. This is available at http://www.mfe.govt.nz/have-your-say-decommissioning-offshore-oil-and-gas. If you do not have access to a computer, a copy of the submission form can be posted to you
- write your own submission.

If you are posting your submission, send it to EEZ decommissioning regulations, Ministry for the Environment, PO Box 10362, Wellington 6143 and include:

- the title of the consultation (Decommissioning plans under the EEZ Act)
- your name or organisation
- postal address
- telephone number
- email address.

If you are emailing your submission, send it to eezregulations@mfe.govt.nz as a:

- PDF
- Microsoft Word document (2003 or later version).

Submissions close at 5.00 pm on 21 September 2018.

Contact for queries

Please direct any queries to:

Phone: +64 4 439 7400
Email: eezregulations@mfe.govt.nz
Postal: EEZ decommissioning regulations, Ministry for the Environment, PO Box 10362, Wellington 6143

Publishing and releasing submissions

All or part of any written submission (including names of submitters) may be published on the Ministry for the Environment's website, www.mfe.govt.nz. Unless you clearly specify otherwise in your submission, the Ministry will consider that you have consented to website posting of both your submission and your name.

Contents of submissions may be released to the public under the Official Information Act 1982, following requests to the Ministry for the Environment (including via email). Please advise if you have any objection to the release of any information contained in a submission and which part(s) you consider should be withheld, together with the reason(s) for withholding the information. We will consider all such objections when responding to requests for copies of, and information on, submissions to this document under the Official Information Act.

The Privacy Act 1993 applies certain principles about the collection, use and disclosure of information about individuals by various agencies, including the Ministry for the Environment. It governs access by individuals to information about themselves held by agencies. Any personal information you supply to the Ministry in the course of making a submission will be used by the Ministry only in relation to the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry may publish.

Questions to guide your feedback

Table 2: Consultation questions at a glance

Number	Questions	Page
1	Do you agree with the Government's proposal not to specifically list the activities for which section 38(3) applies?	15
2	Do you agree with the information requirements for a decommissioning plan? If not, what do you think should be required in a decommissioning plan?	19
3	Do you agree that a comparative assessment is an appropriate methodology to present the available options for dealing with structures to be decommissioned?	19
4	Do you agree that a comparative assessment should only be required if an operator seeks to dump or abandon an installation, or parts thereof? If not, why not?	19
5	Do you agree that a comparative assessment should be required for pipelines regardless of whether the operator seeks to abandon or remove the pipeline? If not, why not?	19
6	Do you think it would be useful if there were a standard template for decommissioning plans? If not, why not?	19
7	Do you agree with the information required to describe the engagement and consultation carried out by an operator on a decommissioning plan?	24
8	Before the EPA publishes a decommissioning plan for public notification, should it be required to undertake (1) an administrative check that the plan contains the information prescribed by regulations (2) a limited but evaluative assessment of the adequacy of the information or (3) a full assessment against the set of criteria prescribed in regulations?	24
9	What is your experience of submitting on notified marine consent applications and do you consider that the quality of information was adequate to make an informed submission?	24

10	Are you aware of any parts of a decommissioning plan that are unlikely to be appropriate or relevant for public notification? Are there any matters that you consider should be withheld?	24
11	Do you agree with the minimum timeframe for submissions? If not, why not?	24
12	Do you think the proposed regulations should specify a list of parties that the EPA must consult or seek advice from prior to making a decision?	24
13	Do you agree that the EPA should be able to request further information on a decommissioning plan at any stage of the process to enable it to carry out its functions?	24
14	Do you agree the EPA should recover costs relating to decommissioning plans from the person who submits a decommissioning plan?	24
15	Do you agree that the proposed regulations should provide for both (a) and (b) in section 100D(2)?	26
16	Do you agree that the EPA should be able to decide whether public consultation on changes to a plan is necessary? If not, why not?	26
17	Do you agree that the same criteria can be applied to pipelines as applied to installations and structures? If not, why not?	28
18	Do you agree with the criteria proposed? If not, what criteria do you think should be considered for accepting a decommissioning plan?	28
19	Do you agree that a case by case approach should be taken to determine how installations, structures and pipelines should be dealt with?	28
20	Do you think that guidance would be helpful for industry and the public to understand how decommissioning would work under the EEZ Act and RMA?	31
21	Are there any other matters you would like to raise?	

What happens next?

Once submissions have been considered, further work will be undertaken to refine proposals and draft regulations. The Government intends to progress this work into regulations in 2019.

Appendix 1: How is decommissioning currently managed in the EEZ?

About the EEZ Act

The EEZ Act came into force on 28 June 2013, when the first set of regulations under the Act were made. The purpose of the EEZ Act is to[12]:

1. promote the sustainable management of natural resources of the EEZ and continental shelf
2. protect the environment from pollution by regulating or prohibiting the discharge of harmful substances and the dumping or incineration of waste or other matter, in relation to the EEZ, continental shelf and waters above the continental shelf beyond the outer limits of the EEZ.

Under the EEZ Act, sustainable management means managing the use, development, and protection of natural resources in a way, or at a rate, that enables people to provide for their economic well-being while:

1. sustaining the potential of natural resources (excluding minerals) to meet the reasonably foreseeable needs of future generations
2. safeguarding the life-supporting capacity of the environment
3. avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The EEZ Act regulates effects on the environment and existing interests from a specific list of activities not previously regulated in the EEZ or continental shelf. These include activities such as:

- constructing or placing a structure on the seabed
- disturbing the seabed in a manner likely to have adverse effects
- depositing anything or dumping material on the seabed
- discharging harmful substances
- creating noise that can have an adverse effect on marine life.

Decision criteria under the EEZ Act set out matters to be considered by the EPA when determining a marine consent application.

In the Act, an 'effect' refers to any[13]:

- positive or adverse effect
- temporary or permanent effect
- past, present, or future effect
- cumulative effect that arises over time or in combination with other effects
- potential effect of high probability
- potential effect of low probability that has a high potential impact.

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[12] Section 10(1) of the EEZ Act.

[13] Section 6(1) of the EEZ Act.

The ‘environment’ is defined as the natural environment, including ecosystems and their constituent parts and all natural resources, of—

1. New Zealand
2. the Exclusive Economic Zone
3. the continental shelf
4. the waters beyond the Exclusive Economic Zone and above and beyond the continental shelf.

Existing interests in relation to New Zealand, the EEZ, or the continental shelf are the interest a person has in[14]:

- any lawfully established existing activity, whether authorised by or under any Act or regulations, including rights of access, navigation, and fishing
- any activity that may be undertaken under the authority of an existing marine consent granted under section 62 of the EEZ Act
- any activity that may be undertaken under the authority of an existing resource consent granted under the Resource Management Act (1991)
- the settlement of a historical claim under the Treaty of Waitangi Act (1975)
- the settlement of a contemporary claim under the Treaty of Waitangi as provided for in an Act, including the Treaty of Waitangi (Fisheries Claims) Settlement Act (1992)
- a protected customary right or customary marine title recognised under the Marine and Coastal Area (Takutai Moana) Act 2011.

Considering effects outside the EEZ

The EPA can consider the effect of any decision they make under the EEZ Act on the wider environment and other regimes. For a marine consent application, the EPA must consider (among other things):

- the effect on the environment (environment is widely defined)
- the nature and effect of other marine management regimes (including the RMA)
- any other matter the consent authority considers relevant and reasonably necessary to determine the application.

It is therefore expected the EPA would consider a decommissioning plan’s environmental effects outside of the EEZ, as well as its interaction with the RMA as another marine management regime.

What are the effects of decommissioning?

The effects associated with decommissioning depend on how structures and pipelines are dealt with at the end of their life. Potential options include dismantling and removing infrastructure, partial removal, abandonment in-situ or dumping of infrastructure at a nominated dump site.

[14] Section 4 of the EEZ Act.

Preparatory work

There is likely to be a great deal of preparatory work on the platform to prepare it for decommissioning, regardless of whether it is removed or abandoned. Preparatory work is likely to take place over a period of months, and may require the use of lights on the platform at night.

Night lights typically attract and disturb seabirds, and may cause them to collide with the remaining super-structure. Although these frequently cause some seabird deaths, on average there would be little impact on most seabird populations, but even a few deaths could affect the recovery of populations of some nationally critical species.[15] Marine mammals may also be affected by the increased activity around the platform during this phase.

Removal of structures

Regardless of methodology, removal of structures, pipelines and power cables is likely to create substantial disturbance to bottom (benthic) habitats.[16] For example, marine growth adds significant weight to already heavy platform jackets and supports,[17] and sections of the platform would likely be placed on the sea floor during the breakdown process. In addition, the required support vessels may require extensive anchor spreads, causing disturbance to benthic habitats. This disturbance may be avoided by using dynamic vessel positioning technology. Recovery of benthic organisms once the platform is removed would take many months to years.

Explosive charges are sometimes used to sever the jacket for removal. This has a very short-term (although powerful) impact on marine biota. The use of explosives is likely to have impacts on fish larvae and juveniles, as well as birds and marine mammals.[18][19]

Discharges to water

Impacts on water quality are most likely to occur from the following sources of impact:[20]

- accidental spills or discharges from surface vessels, or from materials released during disassembly of the platform and/or flushing of pipelines and machinery
- re-suspension of contaminated materials in shell mounds from disturbance of the seabed
- invasive marine species entering state waters in vessels' ballast water, or as fouling organisms on hulls.

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15 NIWA 2012 Expert Risk Assessment of Activities in the New Zealand Exclusive Economic Zone and Extended Continental Shelf.

16 Bernstein et al. (2015) Evaluating Alternatives for Decommissioning California's Offshore Oil and Gas Platforms: A Technical Analysis to Inform State Policy. California Ocean Science Trust.

17 Ferris, J. (2014) Environmental Considerations in Offshore Decommissioning and Removal. Presentation at 'Indonesia abandonment and site restoration conference and exhibition', BMT Cordah Limited.

18 NIWA 2012 Expert Risk Assessment of Activities in the New Zealand Exclusive Economic Zone and Extended Continental Shelf1.

19 Bernstein et al. (2015) Evaluating Alternatives for Decommissioning California's Offshore Oil and Gas Platforms: A Technical Analysis to Inform State Policy. California Ocean Science Trust.

20 Ibid.

Disposal of materials

A range of materials may be shipped back to shore (either in New Zealand or internationally) for processing. Most of these are recyclable scrap steel, or non-hazardous wastes (such as cement, plastic, and wood) but would also include hazardous materials (such as polychlorinated biphenyls (PCBs) or asbestos). All materials will need to be disposed safely and in accordance with the relevant legislative requirements (outside of the EEZ Act).

Abandonment in-situ or dumping

The abandonment or dumping of a steel platform has lasting impacts on the local benthic ecosystem. The platform slowly rusts and disintegrates over a period of approximately 100 years. Recovery is likely to take many decades.[21] The overall area impacted is however very likely to be only a small proportion of the benthic ecosystem in the licence area or the oil basin. The overall risk to ecosystem function, protected benthic species and key species is therefore predicted to be low.[22]

Structures and pipelines left on the sea bottom can however cause physical interference with fishing activities for decades after they are abandoned.[23] Degradation and dissipation over wide areas could create risks during bottom and mid-water trawling, as well as bottom long-lining.

[21] NIWA 2012 Expert Risk Assessment of Activities in the New Zealand Exclusive Economic Zone and Extended Continental Shelf1.

[22] Ibid.

[23] Patin, S. (1999) Environmental Impact of the Offshore Oil and Gas Industry EcoMonitor Publishing, New York, 425 pages, ISBN: 0-9671836-0-X.

Appendix 2: New Zealand's international obligations

Section 11 of the EEZ Act states the Act continues or enables the implementation of New Zealand's international obligations relating to the marine environment. New Zealand's international obligations include those under the:

- United Nations Convention on the Law of the Sea 1982 (UNCLOS)
- Convention on Biological Diversity (CBD)
- International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL)
- Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter, 1972 (the London Convention) and the subsequent 1996 Protocol (the London Protocol).

New Zealand also has obligations under the convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986 (Noumea Convention).

UNCLOS: In accordance with international law, New Zealand exercises sovereign rights over its continental shelf for exploring it and exploiting its natural resources. UNCLOS specifies the key international obligations for states on the exploration and exploitation of the oil and gas resources of the continental shelf, and the installation and decommissioning of abandoned and disused offshore structures. UNCLOS also provides that States have a general obligation to protect and preserve the marine environment. UNCLOS provides a more specific obligation to take all measures necessary to prevent, reduce and control pollution of the marine environment from any source.

For decommissioning, UNCLOS requires installations or structures which are abandoned or disused be removed to ensure safety of navigation, considering any generally accepted international standards established by the competent international organisation (the International Maritime Organisation (IMO)). Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other states. Appropriate publicity must be given to the depth, position and dimensions of any installations or structures not entirely removed.

The *1989 IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone* recommend standards to be followed by a coastal state when making decisions regarding decommissioning. These are not binding obligations, but reflect international practice from the IMO. Under these guidelines, the general premise is all disused installations and structures must be entirely removed, except when special circumstances consistent with the IMO Guidelines can be shown to apply. There are several criteria for the coastal state to consider when determining whether to allow an offshore installation or structure, or part thereof, to remain on the seabed. These include consideration of the effects on safety, marine environment, cost, technical feasibility and risk of injury to personnel. In the case of partial removal of subsea structures, there must be at least 55 metres of unobstructed water depth to prevent a hazard to navigation.

Convention on Biological Diversity (CBD): The CBD reiterates States have the sovereign right to exploit their own resources, pursuant to their own environment policies, and the responsibility to ensure activities within their jurisdiction or control do not cause damage to the environment of other States, or of areas beyond the limits of national jurisdiction. The CBD requires countries to provide for environmental impact assessments of proposed projects

likely to have significant adverse effects on biological diversity. The CBD aims to avoid or minimise such effects and, where appropriate, allow for public participation in such procedures.

MARPOL: New Zealand is party to Annex I, II, III and V of the International Convention for the Prevention of Pollution from Ships 1973 (MARPOL), as modified by the Protocol of 1978. MARPOL Annex I prescribes standards for the prevention of pollution by oil. Annex V sets regulations for the prevention of pollution by garbage. These regulations outline the mandatory thresholds, conditions and reporting requirements. The discharge and dumping regulations under the EEZ Act are consistent with the MARPOL regulations.

The London Convention and Protocol: New Zealand is a party to the London Convention on the Prevention of Marine Pollution by the Dumping of Wastes and Other Matter 1972 (the London Convention) and the subsequent 1996 London Protocol (the London Protocol). The London Protocol stresses the need to protect the marine environment from all sources of pollution, and to promote the sustainable use and conservation of marine resources. The London Protocol defines pollution as wastes and other matter introduced into the sea because of human activity, which is likely to lead to harmful effects on the marine environment. Under the London Protocol, dumping of all waste at sea is prohibited (except for certain types subject to a permit granted by the coastal state).

While pipelines are excluded from the scope of the London Protocol, the abandonment of platforms or other man-made structures at site, and the disposal into the sea of platforms, structures and other matter are considered 'dumping' under the London Protocol. The London Protocol also prohibits the export of wastes or other matter to other countries for dumping or incineration.

Noumea Convention: The Noumea Convention requires Parties to, inter alia, take all appropriate measures to prevent, reduce and control pollution of the Convention Area from any source, and to ensure sound environmental management and development of natural resources, using for this purpose the best practicable means at their disposal and in accordance with their capabilities. The Noumea Convention requires that, where appropriate, Parties assess potential effects of major projects so appropriate measures can be taken to prevent or minimise harmful impacts on the Convention Area (which includes New Zealand's EEZ and continental shelf). Where appropriate, each Party shall invite public comment on such major projects. What constitutes a major project is not defined.

Pipelines and cables

There is no equivalent to Article 60 under UNCLOS that specifically requires the removal of pipelines or cables. New Zealand, however, has jurisdiction over the cables and pipelines constructed or used regarding the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction. As outlined above, it also has general obligations to protect and preserve the marine environment, and to take all necessary measures (consistent with UNCLOS) to prevent, reduce and control pollution of the environment from any source.

UNCLOS defines pollution of the marine environment to include the introduction of man-made substances or energy into the marine environment likely to result in harmful effects to marine life, hazards to human health, hindrance to marine activities, and impairment of quality for use and reduction of amenities.

UNCLOS gives all states the right to lay and maintain submarine pipelines on the continental shelf. While New Zealand (as the coastal state) must not impede the laying of submarine

pipelines by other states (and their nationals) it has the right, under UNCLOS, to take reasonable measures for the prevention, reduction and control of pollution from pipelines.

Appendix 3: Regulatory system overview

Offshore decommissioning – regulatory system overview

	Exploration and proceeding to production	Planning for decommissioning in production	Cessation of production	**Decommissioning**
Operational	• Operator makes a discovery, models the recoverable resource and creates a field life economic model, including decommissioning costs, to support investment decisions. • All currently operating offshore installations in New Zealand are owned by commercial joint-venture. It is very rare for a company to have a working interest greater than 60% in an offshore installation. • JV partners are jointly and severally liable on permit conditions, including decommissioning obligations.	• Joint Venture (JV) partners are party to a joint venture operating agreement (JVOA) that requires funds be put aside over the life of the asset to meet decommissioning cost at end of field life. • JVOAs of this nature are typical for offshore operations in NZ. Decommissioning costs are spread across the JV according to a company's participating interest in a permit. • Farm-in/farm-out decisions are made by JV partners. New JV partners are subject to technical and financial capability assessments by NZP&M.	• The operator and JV partners reach a decision on when a field has reached its end of economic life. Generally, this occurs when the costs of production (opex) exceed expected revenues or because the field can no longer produce hydrocarbons for geological reasons (ie, wells water out). • Sunk costs are not considered, and the calculation is made on a forward-looking basis. • Decisions can also be influenced by long lead in times and planning considerations such as rig availability.	The operator carries out decommissioning in accordance with: • its accepted decommissioning plan (EPA)* • decommissioning-related conditions in its PMP (NZ P&M) • discharge and dumping consents (Board of Inquiry/EPA) • decommissioning-related marine consents (EPA) • the well examination scheme (WorkSafe).
Permitting, tax and royalties NZP&M/IRD	**Royalty rates (Inland Revenue, NZP&M)** • Royalty rate is set at the time an exploration permit is granted. **Exploration and production permits/licenses** • When awarding a PMP, the Minister may include permit conditions for decommissioning structures and abandoning wells in accordance with good industry practice. However, the CMA does not specifically refer to decommissioning or the plugging and abandoning of wells. • As per section 29A of the CMA, before awarding any permit the Minister must be satisfied the applicant has the necessary technical and financial capability to give proper effect work programme obligations and permit conditions, including decommissioning. • The duration of the PMP granted considers the time required to conclude mining activities and to decommission and rehabilitate the site, and is subject to extension with agreement from the Minister. • Some of the older offshore fields, such as Maui and Kupe, are licenses that were awarded under the Petroleum Act 1937.	**Permit transfers and annual reviews** • NZP&M will, on behalf of the Minister, undertake financial and technical capability assessments when a new company takes on ownership and/or operatorship of an offshore installation. • Any such transfers require the consent of the Minister. The Minister can decline if he/she is not satisfied that the transferee is likely to be able to comply with the conditions of, and give proper effect to, the permit, including decommissioning. • In making this assessment the Minister considers whether the transferee has or is likely to have sufficient funds to decommission at the time this obligation falls due. • Annual Review Meetings (ARMs) are held with operators every year over the life of a field, in which NZP&M will have ongoing discussions with operators on their estimated timeline and key sensitivities.	**End of permit and abandonment** • Currently, all offshore operations have bespoke permit conditions relating to "abandonment". These are generally not specific as to what decommissioning entails beyond following "good industry practice". (The Kupe permit, however, has very specific decommissioning obligations). • This is designed to accommodate changing technology, regulations eg, environmental) and circumstances (eg, shared infrastructure).	**Tax and royalty rebates (Inland Revenue)** • Under current settings, the Crown is liable to pay up to 42% of decommissioning costs as tax and royalty rebates to operators.
Environmental EPA MNZ MPI DoC Regional Council	**Marine consent for production activities** • All new marine consent applications involving structures and pipelines for production activities need to outline their proposed approach to decommissioning. • This strengthens the EPA's ability to consider the whole-of-life effects of new activities and will provide additional assurance to the government of an operator's commitment to decommission facilities at the end of their economic life.	**Decommissioning plan*** • Operators must prepare a decommissioning plan to outline their proposed approach to deal with the installations, structures and pipelines at the end of their life. This plan must be accepted by the EPA before the operator may apply for marine consent for discretionary decommissioning-related activities. • Regulations will set out requirements for the decommissioning plan. • Operators are required to consult on their decommissioning plan, rather than on individual marine consent applications for decommissioning.		**Marine consent for discretionary decommissioning activities** • An operator is required to seek the necessary marine consents to carry out decommissioning-related activities in section 20 of the EEZ Act. **New process*** • Marine consent applications for decommissioning-related activities will include a decommissioning plan accepted by the EPA and must be in general accordance with the accepted plan. • Decommissioning-related marine consent applications are non-notified. • The EPA (rather than a board of inquiry) will be the decision-maker for all decommissioning-related marine consent applications. **MPI and Maritime NZ** • MPI will manage any biosecurity issues associated with rigs and vessels. • Maritime NZ's role is to ensure the risk associated with oil spills is being appropriately managed and that marine navigational charts are updated. **District and regional councils** • The operator will need to apply for relevant district council consents for dumping material/waste onshore. • The regional council regulates activities in the territorial sea.
Health and Safety WorkSafe NZ	**Well examination scheme** • HSE regulations require a well examination scheme, which provides an independent check on well design, construction, operation, maintenance, modification, suspension and abandonment operations. A well examination scheme must be prepared and implemented for all wells. • Ongoing well examination throughout life of permit.			**Safety case and well examination** • Operators are required to have a valid safety case to account for decommissioning activities subject to agreement with WorkSafe. • The well examiner must verify that so far as reasonably practicable, there can be no unplanned escape of fluids (including gas) from the well or from the strata to which the well is connected.

The regulatory regime for oil and gas operations

The oil and gas industry in New Zealand must meet several regulatory requirements before operations can begin. The EEZ Act regime forms part of this regulatory system, by providing explicit consideration of environmental effects associated with activities in the EEZ.

Application for a Crown Minerals Permit

Under the Crown Minerals Act 1991 (CMA), operators must obtain a petroleum prospecting permit, a petroleum exploration permit or a petroleum mining permit from New Zealand Petroleum and Minerals (NZPAM), a business group of the Ministry for Business Innovation and Employment (MBIE).

NZPAM assesses the financial and technical capability of an operator and the operator's high-level health, safety and environmental response ability.

When evaluating an application for a petroleum mining permit under the CMA, the Minister of Energy and Resources assesses an applicant's financial capability to give proper effect to their work programme through to the end of production, including decommissioning. This effectively manages financial risk exposure from companies unlikely to have the capability to fund decommissioning. When existing permits are transferred, the Crown also assesses financial capability. However, actual liability for decommissioning costs is not specifically covered by the CMA.

In considering the duration of the mining permit to be granted, the Minister considers the time required to conclude mining activities, to decommission operations and to rehabilitate the site or sites as necessary. The Minister may include provisions in a petroleum mining permit work programme for decommissioning structures and abandoning wells, which is a good industry practice. However, the CMA does not include any specific reference to decommissioning, plugging or abandonment.

Application for a marine consent

Operators who successfully gain a permit from NZPAM will need to apply for a marine consent from the EPA, before they can carry out any oil and gas activities in the EEZ. The EPA manages the effects on the environment and on existing interests of activities in the EEZ and continental shelf. The marine consent sets out what conditions are imposed to address the effects of the activity on the environment and existing interests.

Under section 13 of the EEZ Act, the functions of the EPA include:

- deciding applications for marine consents
- monitoring compliance with the EEZ Act
- enforcing the requirements of the EEZ Act, and of regulations made and consents granted under it.

Preparation of a safety case

Under the Health and Safety at Work Act 2015, and the Health and Safety at Work (Petroleum Exploration and Extraction) Regulations 2016, operators must submit a safety case for any offshore installation to the High Hazards Unit (HHU), part of WorkSafe New Zealand. The HHU need to accept this safety case before the operation of the offshore installation can begin. Operators must update their installation safety case, prior to doing any decommissioning activities. Wells must be plugged and abandoned in accordance with requirements.

The proposed regulations also require an operator to produce and implement a well examination scheme for all wells. This scheme involves independent and competent examination of a well's design, construction, operation, maintenance and abandonment. The proposed regulations require a well is designed and constructed so that no fluids can escape after it has been abandoned. This is verified by an independent well examiner, and the whole process administered by the HHU.

The focus of the HHU and the health and safety regulations are to ensure the health and safety of workers. Measures taken to ensure the health and safety of workers are often also effective in preventing adverse effects on the environment and existing interests.

Preparation of contingency plans

Under the Marine Protection Rules,[24] operators must complete a well control contingency plan, focusing on measures to re-establish well control in the event of well failure, and an oil spill contingency plan that anticipates the steps the operator would take in response to an oil spill. These must be approved by Maritime New Zealand before an operator can carry out activities.

Notification of submarine cables and pipelines no longer being used

The primary focus of the Submarine Cables and Pipelines Protection Act 1996 (SCAPPA) is to manage the risks associated with anchoring ships or fishing activity within a designated cable or pipeline protection zone in the territorial sea. SCAPPA requires the Minister of Transport be notified immediately if a cable or pipeline is not being used. It also provides for the Minister to apply to the district court for removal of any abandoned cable or pipeline that is a hazard to fishing operations or the anchoring of ships.

Tax treatment for decommissioning

As no offshore installations have been decommissioned in New Zealand, the petroleum mining decommissioning tax rules under the Income Tax Act 2007 have never been applied. However, in recent years, as the industry has started planning for future decommissioning and working with Inland Revenue (IRD), several issues have been identified. Proposed changes to the Income Tax Act 2007 (expected to be enacted in 2018) will replace the current spread-back with a refundable credit. The spread-back allows a petroleum miner to reopen prior income tax returns to receive a refund of tax paid when a tax loss arises due to the relinquishment of a mining permit. The refundable credit will allow a petroleum miner to receive a refund in the current tax year, limited to prior year tax payments, when losses are incurred because of decommissioning or the permanent cessation of production.

The primary concern is the legislation prevents Inland Revenue Department (IRD) from refunding an amount of tax if more than four years have passed from the end of the tax year in which an income tax return was filed. IRD are proposing changes to the Income Tax Act 2007 to address this issue, which are expected to be enacted in 2018. You can find out more information about the proposed changes on the IRD website.

[24] Made under the Maritime Transport Act 1994.

Other marine management regimes

Other marine management regimes relevant to the decommissioning of oil and gas operations in the EEZ include the:

- Biosecurity Act 1993
- Continental Shelf Act 1964
- Fisheries Act 1996
- Marine Mammals Protection Act 1978
- Marine Reserves Act 1971
- Wildlife Act 1953.

Appendix 4: New Zealand's oil and gas industry

History of offshore oil and gas in New Zealand

New Zealand has a long history of oil and gas exploration and production. The Alpha well, dug in 1865 near the Moturoa seeps in Taranaki, was one of the first exploration wells in the world.

In 1959 the Kapuni gas-condensate field was discovered onshore Taranaki, and the Maui gas-condensate field was discovered offshore 10 years later in 1969. The Maui field made New Zealand self-sufficient in gas. Production from Maui began in 1979. The Maui facility was at the cutting edge of what could be accomplished offshore at the time. All current production comes from the onshore and inshore part of the Taranaki Basin.

There are currently five offshore developments producing in New Zealand: Maui, Pohokura, Tui, Maari and Kupe. These are operated by a mix of New Zealand and overseas companies. Table 3 below provides a summary of the current offshore fields producing hydrocarbons in New Zealand.

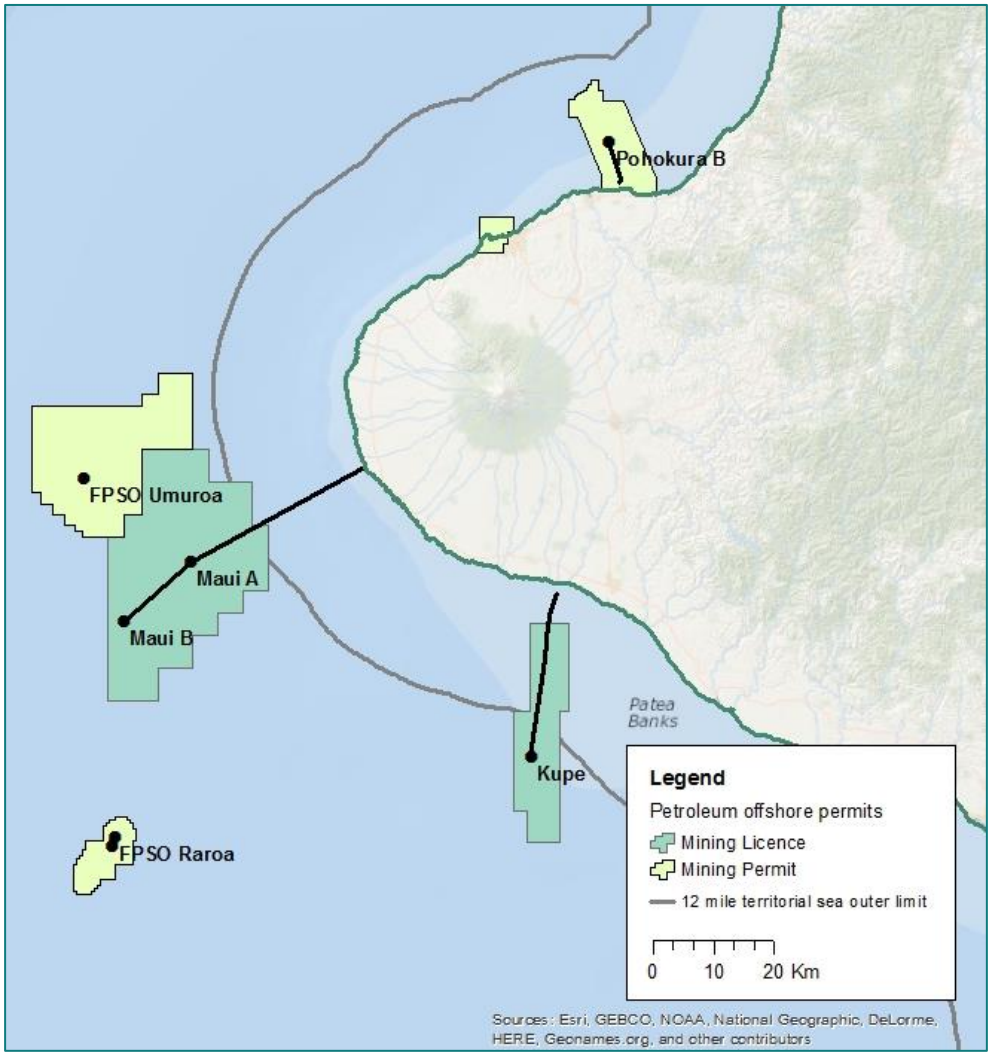
Table 3: Summary of current producing offshore fields in the Taranaki basin

Field	Operator	Type	Producing since
Maui – Petroleum Mining License (PML) 381012	Shell Taranaki Limited	Maui A = gas, Maui B = condensate and gas	1969
Pohokura – Petroleum Mining Permit (PMP) 38154	Shell Exploration NZ Limited	Condensate and gas	2006
Tui – PMP 38158	Tamarind Taranaki Limited	Oil	2007
Maari – PMP 38160	OMV NZ Limited	Oil	2009
Kupe – PML 38146	Lattice Energy	Oil/condensate and gas	2010

Three of the facilities, Maui, Kupe and Pohokura, are fixed structures with sub-sea export pipelines to onshore processing facilities, whereas Maari and Tui use Floating Production Storage and Offloading (FPSO) vessels.

No offshore developments have been fully decommissioned in the New Zealand. In 2006, there was a partial decommissioning of the Maui development, when the FPSO Whakaaropai moved off station once oil production from the Maui B platform finished.

Figure 4: **The five offshore production fields currently producing hydrocarbons, offshore Taranaki basin**



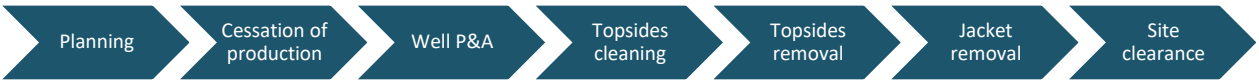
What offshore decommissioning will happen in New Zealand?

Typically, a decommissioning project will occur at the end of the economic life of the facilities. It is possible this may be different to the life of the original oil and gas field. The cost and complexity of installing facilities offshore mean that operators will often look for additional development opportunities to keep the facilities full.

Operators typically prefer to defer decommissioning costs until as late as possible. The main driver for this is New Zealand's geographic isolation and small (by international standards) oil and gas sector, meaning the vessels and cranes needing decommissioning must be mobilised to New Zealand from overseas. Mobilisation can add significantly to the cost of the project, so operators are incentivised to align decommissioning activities to keep costs down.

Decommissioning an offshore facility is an expensive, complex undertaking, often taking years to plan and complete safely. Operators must manage risks to the health and safety of workers and to the environment, as well as control project costs.

To remove a platform, several activities must be done which are considered standard for any steel jacket platform. The general process is shown below, but does not necessarily always occur in a linear sequence.



Planning

In the planning stage, different strategies for removal are assessed and a decommissioning plan is often developed, which is submitted to the appropriate regulator for approval.

Cessation of production

This stage often involves closing the wells and shutting down the platform in preparation for decommissioning.

Plugging and abandonment of wells

This generally involves putting concrete plugs in different levels in the well – at the reservoir depth, at cap-rock level and just under the seabed.

Topsides cleaning

This involves removing all hydrocarbons and hazardous waste that can interfere with the removal activities later. Piping and production systems are generally flushed with water and checked for hydrocarbons, chemicals are removed, batteries depowered, and loose materials and equipment removed.

Topsides removal

Topsides are generally removed by either using a crane vessel or cut into pieces that fit in a container and offloaded by a platform crane onto a supply vessel.

Jacket removal

The feasibility of removal and the way in which a jacket is removed depends on the depth of the water, the weight of the structure, vessel capabilities and the location of onshore recycling yards. Generally, jackets in deep water cannot be lifted onto a cargo barge, and would need to be cut into pieces. Piles are severed below the seabed at a depth ensuring any remains are unlikely to be uncovered.

Site clearance

The final step is site clearance. The area where the installation was located is checked by remotely operated vehicles (ROV) and/or divers, for any debris left behind. Any environmental impact is noted, and the area is verified as clear of any obstructions for marine traffic and fishing operations.

Pipelines

The approach to the removal or abandonment of pipelines varies, depending on which jurisdiction they fall under, their size and their position on or under the seabed, the seabed terrain and water depth. The United States requires pipelines be cleaned and completely removed or decommissioned on-site where they do not constitute an obstruction above the seabed, thereby safeguarding fishing, navigation, commercial and other interests.[25] The UK and Norway apply a case-by-case approach, considering alternatives, environmental effects and the interests of other sea users.[26] Any pipelines allowed to be left in position must be cleaned, filled with seawater and sealed.

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[25] Ayoade *Disused Offshore Installations and Pipelines: Towards "Sustainable Decommissioning"* 108.

[26] Ayoade *Disused Offshore Installations and Pipelines: Towards "Sustainable Decommissioning"* 109.

Appendix 5: How do other jurisdictions deal with decommissioning?

United Kingdom

The Government serves a notice on companies, alerts them to their decommissioning liability and requests submission of a decommissioning plan. The notice specifies the date of when the decommissioning plan must be submitted, or provides it must be submitted on or before a date as directed by the Government.

Detailed requirements for what a decommissioning programme should contain are set out in a guidance document, produced by the Department for Energy and Climate Change (DECC). Suggested information includes a description of the items to be decommissioned, removal and disposal options, wells, drill cuttings, environmental impact assessment (EIA), consultations, costs, schedule and pre-and post-monitoring surveys. The precise content may vary, according to the circumstances of the decommissioning proposal. For example, it may deal with decommissioning of all the facilities in a field or part of the facilities or a pipeline.

Activities covered under the decommissioning plan typically involve the removal of infrastructure, such as platform jackets/legs and pipelines. For an installation, the decommissioning phase would be at the removal of topside stage; for a FPSO, this would be the point of tow-away. For pipelines, there is an interim pipeline regime, where pipelines are kept in place as there may be a potential for re-use and therefore not technically decommissioned. The plan is generally a high-level description of what the operator intends to do, and how.

For activities covered by the plan, the process includes a comparative assessment of options and an EIA, to assess the impacts of those options on the marine environment. Operators only need to do a detailed comparative assessment for those cases where full removal is not proposed.

In addition to the approval of the decommissioning programme, operators need to obtain other environmental consents for the removal of infrastructure from the seabed and for the disposal of waste. Some operators submit a single license application for the project in its entirety, others choose to submit separate applications, depending on the activity or suite of activities.

If waste is taken onshore, a waste management license is needed from the Environment Agency. Discharge permits for any chemicals or oil discharged are also required, and oil pollution emergency plans must be updated.

In the case of a well abandonment, operators have the option to chemically abandon wells and physically abandon, by plugging and cutting the casings if the infrastructure in place (for eg, a well head) has not been served a notice requiring a decommissioning plan. In such cases, the plugging and abandonment can be done at any time. Some wells are issued notices requiring decommissioning plans. However, any activity up to the point of casing severance/well head removal can be done before the approval of the decommissioning plan.

Australia

All operators must have an offshore project proposal (OPP) accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), which covers all

phases of a project; ie, production drilling, installation and commissioning, operations, and decommissioning. Following this, operators must have activity specific environmental plans (EP) for each of the phases of the project under the OPP. An operator can submit separate EPs for each phase, or combine them into one EP. However, an individual EP only has an operating life of five years, at which time it must be revised and resubmitted to NOPSEMA for reassessment and acceptance.

There are no requirements specifying how far in advance operators must submit an EP, but they must have an accepted EP in force before the start of an activity.

The EP must demonstrate dumping or abandoning subsea infrastructure would not only result in an acceptable level of environmental impact and risk, but also leaving the infrastructure would reduce the environmental impacts and risks to as low as reasonably practicable (ALARP). Operators must demonstrate this is the case in perpetuity.

The EP process requires a titleholder to demonstrate they will comply with all legislative and other requirements applying to the activity.

Appendix 6: Glossary

Terms defined in the EEZ Act	
effect	In the Act, an 'effect' refers to any:[27] a. positive or adverse effect b. temporary or permanent effect c. past, present, or future effect d. cumulative effect that arises over time or in combination with other effects e. potential effect of high probability f. potential effect of low probability that has a high potential impact.
environment	'Environment' means the natural environment, including ecosystems and their constituent parts and all natural resources, of— a. New Zealand b. the exclusive economic zone c. the continental shelf d. the waters beyond the exclusive economic zone and above and beyond the continental shelf.
existing interest	'Existing interest' means, in relation to New Zealand, the EEZ, or the continental shelf (as applicable), the interest a person has in:[28] a. any lawfully established existing activity, whether or not authorised by or under any Act or regulations, including rights of access, navigation, and fishing b. any activity that may be undertaken under the authority of an existing marine consent granted under section 62 c. any activity that may be undertaken under the authority of an existing resource consent granted under the Resource Management Act 1991 d. the settlement of a historical claim under the Treaty of Waitangi Act 1975 e. the settlement of a contemporary claim under the Treaty of Waitangi as provided for in an Act, including the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 f. a protected customary right or customary marine title recognised under the Marine and Coastal Area (Takutai Moana) Act 2011.
installations	An offshore installation under the EEZ Act: a. includes an artificial structure used or intended to be used in or on, or anchored or attached to, the seabed for the purpose of the exploration for, or the exploitation or associated processing of, any mineral; but b. does not include a submarine pipeline.
structures	Under the EEZ Act[29] a structure is defined as: a. any building, equipment or device; and

[27] Section 6(1) of the EEZ Act.

[28] Section 4 of the EEZ Act.

[29] Section 4 of the Act.

	b. includes an offshore installation, an artificial island, or a floating platform; but c. does not include a submarine pipeline.
pipelines	The EEZ Act does not define a pipeline, but the meaning of a pipeline is included in the Submarine Cables and Pipelines Protection Act 1996,[30] as "a pipeline used or intended to be used for the conveyance of gas (including natural gas), petroleum, oil, water, or any other mineral, liquid, or substance; and includes all fittings, pumps, tanks, appurtenances, or appliances used in connection with a pipeline". A submarine pipeline is a pipeline that lies beneath the high seas or the territorial sea of New Zealand or the internal waters of New Zealand.
Areas defined in law	
territorial sea	The boundaries of these areas, and the extent of New Zealand's jurisdiction over them, are defined in the United Nations Convention on the Law of the Sea (UNCLOS) and under domestic legislation. You can read a summary on the Ministry website.
exclusive economic zone	
continental shelf	
coastal marine area	
Technical terms	
aquaculture	the breeding, hatching, cultivating, rearing, or on growing of fish, aquatic life, or seaweed for harvest.
biota	the plant and animal life of a region.
hydrocarbons	organic compounds consisting only of carbon and hydrogen. The main components of petroleum are hydrocarbons.

[30] Section 2 of the Submarine Cables and Pipelines Protection Act 1996.