

Regulatory Impact Statement: Maritime and Marine Protection Rules 2010

Regulatory Impact Statement

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Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by Ministry of Transport.

It provides an analysis of options

- to implement standards for the design, construction and equipment of sailing ships
- for a more cost-effective inspection regime for portable fire extinguishers on ships
- to address the operation of bunker barges
- to clarify the applicable rules to prevent pollution of the marine environment from discharges of harmful substances associated with the operation of offshore installations used in mineral exploration and exploitation.

The options are constrained by the overall scheme of the current maritime rules and the Maritime Transport Act 1994. The preferred options are consistent with other maritime rules and would ensure greater safety for commercial ships and the marine environment. Accurate data on the number of commercial ships affected, the costs to operators and the risks associated with potential maritime accidents is not available for all the options, requiring the use of estimates.

The options proposing new or amended maritime rules do not impose any additional costs on businesses. The options proposing new marine protection rules may add minor costs to businesses in order to address the risks to the marine environment. None of the options proposing new or amended rules impair private property rights or override fundamental common law principles. Some of the proposed rules incorporate international standards by reference to ensure consistency and the suitability of equipment.

Part 40E: Design, Construction and Equipment – Sailing Ships

Status quo and problem definition

1. Under the Maritime Transport Act 1994 and maritime rules, the design, construction and equipment requirements for different ship types are set out in specific maritime rules.
2. In contrast to other commercial ship types, the design, construction and equipment of sailing ships less than 45 metres in length are not covered by maritime rules. Sailing ships are expressly excluded from passenger ship rules (Part 40A).
3. The design and construction requirements for sailing ships are substantially different from other ships that rely mainly on motorised power. For example, a sailing ship is meant to heel (lean) to a certain angle while travelling under sail, while motor ships are not.
4. Under subsection 34(2) of the Maritime Transport Act 1994 “the requirements, standards, and application procedure for each maritime document, and the maximum period for which each document may be issued or recognised, as the case may be, shall be prescribed by maritime rules.”
5. Part 40B of the maritime rules applies to most ships, including sailing ships, over 45 metres in length or that undertake an international voyage. Ships of that size are governed by the International Convention for the Safety of Life at Sea 1974, its Protocols and Amendments.
6. The absence of any design, construction and equipment rules for sailing ships is a gap in the regulatory system.
7. The need for design rules for sailing ships became apparent to the Maritime Safety Authority (as it then was), and with the agreement of the Minister for Transport Safety, rules development started in 2000.
8. Development of rules for sailing ships has been part of the maritime rules programme since 2000 and has been designated Part 40E. It was last included in the transport rules programme for 2009/2010, agreed by Cabinet on 19 October 2009 (CAB Min (09) 37/5D).
9. Since the draft of Part 40E was published, many surveyors have applied the design rules to the greatest extent possible. It has already become the de facto design standard for commercial sailing ships in New Zealand.
10. The absence of appropriate design rules for sailing ships does not seem to have contributed significantly to serious accidents. This is largely due to the good practice of ship builders, surveyors and owners, rather than control by regulation.
11. The use of sailing ships for commercial passenger operations is increasing, adding to the need for design rules. Currently no exact data is available on the number of commercial sailing ships. According to estimates, the fleet of commercial ships has increased from 17 in 2000 to over 50 in 2009; those used by sailing clubs have increased from 100 to 170 in the same period. It is likely that the fleet of commercial sailing ships will continue to increase.

Objectives

12. The objective is to ensure the safety of commercial sailing ships through adequate design, construction and equipment standards. This is to be achieved within the current legislative framework, ensuring that any inconsistencies in the regulatory system are addressed.

Regulatory impact analysis

13. Analysis has led to the identification of three options:
 - (i) the development of guidelines or a New Zealand Standard
 - (ii) an amendment to Part 40A of the maritime rules
 - (iii) the implementation of a new Part 40E of the maritime rules to provide standards for sailing ships.

(i) Guidelines or New Zealand Standard

14. This option would introduce guidelines or a New Zealand Standard for the design, construction and equipment of sailing ships, rather than maritime rules. The maritime rules developed since 2000 would form the basis for the guidelines.
15. Guidelines by Maritime New Zealand could be developed quickly from the current draft rules. Their status and application would give rise to uncertainty and may expose builders, surveyors and operators of sailing ships to greater liability.
16. The development of a New Zealand Standard would take considerable time as it would require a group of experts to be set up. The cost for developing a New Zealand Standard is estimated to be \$100,000.
17. The development of guidelines or a Standard, instead of maritime rules, is inconsistent with the Maritime Transport Act 1994 and other maritime rules.
18. The proposed maritime rules refer to international standards. It might be possible to instead develop New Zealand standards for these particular areas, but not for the overall design and construction of commercial sailing ships.

(ii) Amend Part 40A to include sailing ships

19. This option would amend maritime rules Part 40A to include sailing ships. Part 40A sets out the requirements for the design, construction and equipment for passenger ships under 45 metres in length and that do not embark on international voyages. Part 40A does not apply to sailing ships.
20. Currently surveyors already use Part 40A and the draft Part 40E to design and survey commercial sailing ships. Surveyors adjust the rules of Part 40A to fit sailing ships.
21. Examples of provisions of Part 40A which are not suited to sailing ships are listed below:
 - Size of hatches: small hatches are required for sailing ships to prevent downflooding. In contrast, motor vessels need larger hatches to facilitate egress.

- Stability requirements: a sailing ship is meant to heel (lean) to a certain angle while travelling under sail, while motor ships are not.
 - Engines: engines on sailing ships are just provided for auxiliary power, while they are the main propulsion on motor vessels.
 - Rigging and sails: rigging and sails are crucial for propulsion of sailing ships, but are not covered by Part 40A.
22. Surveyors need to depart significantly from the maritime rules in Part 40A to achieve safety on sailing ships. Some requirements of Part 40A would impose additional costs for features that add no safety benefit on sailing ships.

(iii) Part 40E: preferred option

23. This option would introduce a new Part 40E to maritime rules to set out requirements for the design, construction and equipment of sailing ships under 45 metres in length and not undertaking an international voyage.
24. Implementing a new part to maritime rules is consistent with the Maritime Transport Act 1994 and other maritime rules, and provides consistency across the industry.
25. The rules will only apply to ships that are constructed, or have a major alteration, after the rules come into force. Ships already in use will not be affected, though some owners may choose to apply the provisions of Part 40E.
26. Builders, surveyors and operators of sailing ships expect the implementation of Part 40E and regularly use the draft version already.
27. Maritime rules will provide for the safe design and construction of sailing ships and their certification. Part 40E will give surveyors, owners and operators certainty on sailing ship design.
28. Commercial sailing ships are already required to have Safe Ship Management certification and relevant surveys. The costs of surveys and certification will not increase through implementing more specific rules for design, construction and equipment for sailing ships.
29. Part 40E incorporates several international standards, ensuring that specifications for equipment align with international requirements.
30. The intact stability requirements in Part 40E are different from those in Parts 40A (passenger ships) and 40C (non-passenger ships). They have been developed from British standards, both the *Maritime & Coastguard Agency (MCA) Large Yacht Code* and the *MCA Small Vessels in Commercial Use for Sport or Pleasure, Workboats and Pilot Boats – Alternative Construction Standards*. The intact stability requirements in these standards were drafted following a report conducted after the loss of several British sail training ships.
31. Changes have been made to the rules as a result of the consultation process. The most important of these is the removal of Section 4 from Part 40E (Sail Training Ships), which deals with the requirement for Safe Operational Plans, audits and qualifications. Part 40E prescribes the requirements for the design, construction and equipment of sailing ships and it was felt that Section 4 did not belong in this Part of the rules. It is envisaged that sail training ships will be addressed in separate rules in the future.

Consultation

32. Maritime New Zealand consulted with interested parties, both on the rules as a whole and on the detailed technical standards. On 4 August 2007, Maritime New Zealand published a notice in each of the daily newspapers in Auckland, Wellington, Christchurch and Dunedin inviting comments on the proposed Part 40E. A notice was also published in the *New Zealand Gazette* on 2 August 2007. The Authority then made its Invitation to Comment and draft Part 40E available to the public, with copies being sent automatically to interested parties.
33. Thirty-three submissions were received, mostly commenting on detailed design standards. They were supportive of the overall concept of the draft rules and commented on detailed design standards. Maritime New Zealand made several changes to the proposed rules as a result. An additional section about sail training in small yachts with engines was dropped as a result of submissions.
34. Representatives from the sailing industry have requested that the Minister prioritise the development of Part 40E.

Conclusions and recommendations

35. Standards for the design, construction and equipment of sailing ships are most efficiently implemented by the introduction of a new part to maritime rules. This will give certainty to the industry and is consistent with other legislation and industry practice.

Implementation

36. The proposed option will be given effect by implementing a new Part 40E of the maritime rules. As surveyors are already familiar with the proposed rules, they can easily be taken up by the industry.
37. A communication strategy has been developed by Maritime New Zealand to inform the industry of the changes contained in the proposed rules. Maritime New Zealand will revise reference material such as advisory circulars and website information accordingly.
38. The proposed rules will complete the series of design, construction and equipment rules for ships.
39. The effectiveness of the proposed rules will be ensured by the survey process, as a maritime document will only be issued if a sailing ship complies with the rules.

Monitoring, evaluation and review

40. Maritime New Zealand and the Ministry of Transport will continue to monitor the rules and review any concerns when considering the annual rules programme.

Part 42B Safety Equipment–Fire Appliance Performance Standards Amendment

Status quo and problem definition

41. Portable fire extinguishers on ships currently have to be inspected annually by a ‘competent person’, as defined in the New Zealand Standard for handheld fire extinguishers in buildings. A ‘competent person’ is one who has passed an examination on the inspection and testing of fire-fighting equipment. In practice only fire protection professionals can carry out annual inspections of portable fire extinguishers on ships.
42. The required annual inspection of fire extinguishers has added to the compliance costs for ship operators. At times inspectors travel long distances to carry out very basic inspections.
43. The New Zealand Standard for handheld fire extinguishers in buildings in its entirety does not apply to ships. However, as the New Zealand Standard provides a ready reference, the maritime rules incorporate the requirements with regard to inspection and maintenance.
44. The annual inspection of fire extinguishers to be conducted by a ‘competent person’ is very basic, mainly checking for external signs of possible malfunction. In contrast, the testing and maintenance of fire extinguishers, carried out at least every five years, requires more specialist knowledge.
45. The average cost of an inspection is \$200 per ship, but small ships based in locations away from major centres incur additional travel costs. Currently, about 3,500 vessels are affected by the requirement, so that operators of ships pay approximately \$560,000 per year for inspections of portable fire extinguishers. Each year, twenty percent of the extinguishers do not require an annual inspection, because they undergo five-yearly testing and maintenance.
46. Annual inspection of portable fire extinguishers by a fire protection professional ensures that they are inspected by an external party, so that any neglect by the vessel operator is detected. On the other hand, the current inspection regime may discourage vessel operators to regard inspection of fire extinguishers as their own responsibility.

Objectives

47. The objective is to implement an inspection regime for hand-held fire extinguishers on ships that reduces the compliance cost of ship operators, while ensuring adequate on-board safety.

Regulatory impact analysis

48. Analysis has led to the identification of three options:
 - (i) the development of a New Zealand Standard for portable fire extinguishers on ships
 - (ii) an amendment to the maritime rules to enable operators, owners or masters to inspect and maintain portable fire extinguishers
 - (iii) an amendment to the maritime rules to enable operators, owners or masters to only inspect fire extinguishers.

(i) New Zealand Standard

49. The development of a New Zealand Standard for handheld fire extinguishers on ships could determine an appropriate inspection regime. This option would avoid reliance on standards that have been developed for fire extinguishers used in buildings.
50. The development of a New Zealand Standard takes considerable time as it requires a group of experts to be set up. The cost for developing a New Zealand Standard is estimated at \$100,000.
51. The models of fire extinguishers used in buildings are largely the same as those used on ships. Therefore, developing a totally new Standard adds little practical benefit. Differences, such as inspection requirements, can be addressed through maritime rules.

(ii) Inspection and maintenance of fire extinguishers by operator

52. The option to leave inspection and maintenance entirely to persons designated by the operators of ships would create the risk that fire extinguishers are not adequately serviced. Testing and maintenance of fire extinguishers is a technical task. Safety onboard ships would be compromised if fire extinguishers are not adequately maintained.

(iii) Inspection only of fire extinguishers by operator: preferred option

53. The preferred option is to only require the five-yearly testing and maintenance to be carried out by a 'competent person', as specified in the New Zealand Standard. The periodical inspection of fire extinguishers would become the responsibility of a person designated by the operator. The inspection has to be carried out in accordance with the ship maintenance plan, specifying the timeframe for inspections.
54. If specified by the manufacturer, a fire protection professional may still be required to carry out inspections.
55. Owners, operators and surveyors of ships are required to handle and regularly inspect a wide variety of machinery on board as required by the maintenance plan. They maintain the engine and machinery, including changing air filters. They regularly inspect the windlass, anchor and anchor chain, throwing lines, lifelines and guardrails, as well as emergency communication equipment such as the emergency position indicating radio beacon (EPIRB) and flares.
56. In line with their other safety responsibilities they should also be trusted to conduct basic inspections of fire extinguishers. The principles of self-responsibility and regular inspection of equipment are generally followed in the maritime sector, if possible.
57. Without the need for a fire protection professional to carry out inspection of fire extinguishers, owners and operators of ships can make significant savings, totalling approximately \$560,000 per year.

Consultation

58. Maritime New Zealand carried out public consultation in accordance with the requirements of section 446 of the Maritime Transport Act 1994.

59. On 16 June 2007, Maritime New Zealand published a notice in each of the daily newspapers in Auckland, Wellington, Christchurch and Dunedin inviting comments on the proposed amendment to maritime rules Part 42B. A notice was also published in the *New Zealand Gazette* on 14 June 2007. The Authority then made its Invitation to Comment and draft Part 42B available to the public with approximately 100 copies being sent automatically to interested parties. Comments on the draft Part were requested by 7 August 2007.
60. There were 34 written submissions on the draft. All submissions and any oral comments were considered, and where appropriate, the proposed rules were amended to take account of the comments made.
61. Fire protection professionals were opposed to the proposed Rules Amendment. They are concerned that, without independent inspections, safety onboard ships might be compromised. Officials consider that the proposed amendments will not endanger safety onboard ships. Operators regularly inspect other safety equipment onboard. Adequate audit mechanisms are in place to ensure that inspections are carried out regularly. Fire extinguishers will be tested and maintained by fire protection professionals at least every five years.
62. Ship operators supported the proposed amendments. They are confident that operators can adequately inspect fire extinguishers and are more likely to take an active role if they see inspection as their responsibility rather than that of an outside professional. The preferred option balances the concerns of competing interests and ensures appropriate levels of safety.

Conclusions and recommendations

63. The preferred option of requiring testing and maintenance of fire extinguishers by 'competent persons,' and regular inspection by a person designated by the operator, balances safety and compliance costs. This option only requires minor amendments to the maritime rules.

Implementation

64. The preferred option will be implemented by amending maritime rules 42B.56(13) and 42B.56(14).
65. A communication strategy has been developed by Maritime New Zealand to inform the industry of the changes contained in the proposed rules. Maritime New Zealand will revise reference material such as advisory circulars and website information accordingly.
66. The proposed Rules Amendment does not affect any other maritime rules or legislation.

Monitoring, evaluation and review

67. Maritime New Zealand and the Ministry of Transport will continue to monitor the rules and review any concerns when considering the annual rules programme.

Part 90: Pilotage Amendment

Status quo and problem definition

Pilot required for bunker barges

68. Current maritime pilotage rules prohibit exemptions from compulsory pilotage for oil tankers. The rules reflect the increased safety and pollution risks associated with the carriage of oil in bulk.
69. Bunker barges, which are used to refuel ships in port, carry oil in bulk and are considered to be oil tankers for the purposes of pilotage. Therefore, under current rules, they must always carry a pilot on board when operating within a pilotage area.
70. The Rule was not originally envisaged to apply to bunker barges. When the Rule was promulgated in 2003 the only bunker barge operating in New Zealand was not considered to be an oil tanker for the purposes of pilotage. Operations of that barge were confined to Auckland Harbour.
71. In practice, the presence of a pilot on board a bunker barge during routine operations should not be necessary if the barge is crewed by suitably qualified and experienced personnel. The master of a barge operating regularly in one area will have good local knowledge and the oversight of a pilot will add little safety benefit. Oil tankers generally spend most of their time at sea and comparatively little time navigating in harbours. A bunker barge, in contrast, spends most of its time operating in a harbour and little time at sea. Presently, the barge operator must nevertheless incur the cost of engaging a pilot during routine operations.
72. Under the Maritime Transport Act 1994 the pilot must be a separate person from the master. Even if the master of the bunker barge was to hold a pilot licence for the pilotage area, a separate pilot would still be required. Similarly, a master's pilotage exemption cannot be used to exempt a master of an oil tanker from carrying a pilot in a pilotage area.
73. As a matter of policy, pilotage limits and requirements are set by maritime rules, not through local bylaws. Similarly, any exemptions are granted by the Director of Maritime New Zealand. This paper does not propose a fundamental review of pilotage rules. Therefore, any option will have to be consistent with current and proposed rules and regulations.
74. Bunkering ships by barge is well established practice in ports around the world as it allows ships to refuel without having to move to a dedicated bunkering berth. In many cases such operations, where they are being carried out on a regular basis, are exempted from pilotage requirements.
75. The question of whether masters of bunker barges should be permitted to obtain an exemption from pilotage was included in a recent review of the pilotage rules. As a result of the consultation process, the proposed revised rules would permit the use of the process under section 47 of the Maritime Transport Act 1994 to consider exemptions from compulsory pilotage for oil tankers that are in fact bunker barges. This would alleviate the undue rigidity of the Rule for bunker barges, and allow each case to be considered on its own merits. Due to issues not related to bunker barges or

oil tankers, the new maritime pilotage rules are unlikely to be implemented before October 2010.

Costs

Current pilotage costs

76. In 2009, the bunker barge *Awanuia* entered service, refuelling ships in Auckland and loading fuel at the Marsden Point refinery. It replaced the barge in operation at the time the pilotage rules were introduced in 2003. The *Awanuia* is somewhat larger than the vessel it replaced and also carries out coastal voyages to the refinery. Until the new pilotage rules are in place, the barge must carry a pilot when operating within a pilotage area regardless of whether an exemption might otherwise be appropriate. It is currently the only bunker barge in New Zealand. It is an innovative operating concept that has allowed the bunker fuel storage in Auckland to be decommissioned and the prime waterfront land to be used for development.
77. Pilotage costs vary according to ship size and port operator, with minimum charges of typically \$1000 per event, although at ports with a combined marine service charging system the pilotage element is not readily identifiable. The *Awanuia* carries out several bunkering operations weekly at Auckland, with the number increasing during the cruise ship season. In the period April to December 2009, the *Awanuia* carried out 151 bunkering operations. One piloted movement of the barge may include a number of bunker transfers. An approximate cost of \$3,000 per week may be assumed, which the operator of the *Awanuia* has to bear.

Consequences of oil spills

78. The potential cost of an oil spill from a bunker barge such as the *Awanuia* is difficult to determine, as costs would depend on a large number of variables. Additionally, there are few international and no New Zealand comparative figures for such pollution events. Nevertheless, costs would be substantial and likely to fall on the ship's operator, local residents and the government.
79. International analysis of extensive spill data estimates the average total cost per tonne of oil spilled to be in excess of \$70,000.
80. An example of a high impact oil spill occurred when the *Solar 1* sank in the Philippines in 2006. When the 2,000 tonne tanker sank, it lost its entire cargo of fuel oil. Clean-up costs amounted to approximately \$12 million, but claims from the local fishing and tourism industries added up to a further \$29.3 million. When the cargo ship *Pacific Adventurer* spilled 270m³ of fuel oil off the coast of Queensland in 2009, clean-up costs amounted to approximately \$42 million.
81. The *Awanuia* has a cargo capacity of 4,174 tonnes. Any spill from the *Awanuia* would probably be limited to one or two tanks, with individual tank capacity of approximately 500 tonnes. The costs of an oil spill response could easily amount to several million dollars. Additionally, such an oil spill in Auckland harbour would have serious environmental, cultural and social impacts affecting marine species and birds, fisheries and recreational use of the harbour.
82. Under the International Convention on Civil Liability for Oil Pollution Damage, the owners of the *Awanuia* would be liable for no more than about \$9.5 million. The New Zealand Oil Pollution Fund can be drawn on to cover some of the costs of

controlling marine oil spills, if the costs cannot be recovered from the person who caused the oil spill. That would leave affected persons, local and national government to face the remaining cost. Compensation for pollution damage, however, may also be available from the International Oil Pollution Compensation Fund.

Likelihood of an oil spill

83. The *Awanuia* has been constructed to the latest safety and pollution prevention standards, has high manoeuvrability and is operated to stringent standards. These features reduce the likelihood and severity of any oil spill.
84. The likelihood of an oil spill occurring is generally greater during the transfer of oil to and from a ship rather than during the navigation of the ship. Most oil spills occur due to routine operations and only 5 percent due to groundings and collisions.
85. If the ship is guided by an experienced pilot, the risk of an oil spill occurring as a result of a navigational accident is low. Due to the high costs of maritime accidents and marine oil spills in particular, the additional costs of a pilot are generally justified, unless they are clearly shown to add no additional safety benefit.

Objectives

86. The objective is for maritime rules to take into account the operation of bunker barges, applying pilotage rules that balance safety benefits and environmental protection against costs to operators. Maritime rules should avoid unnecessary rigidity and cost.

Regulatory impact analysis

87. Analysis has led to the identification of two options:
 - (i) amend maritime rules Part 90 to allow bunker barges to navigate in a pilotage area without carrying a pilot on board if the master holds a master's pilotage exemption
 - (ii) enable the granting of an exemption under section 47 of the Maritime Transport Act 1994.
88. No non-regulatory option is available because the problem is created by the content of existing maritime rules.

(i) Standard master's pilotage exemption process

89. This option would amend the rules to allow bunker barges to navigate in a pilotage area without carrying a pilot on board if the master holds a master's pilotage exemption.
90. Under both the current and the proposed fully revised version of the pilotage rules, a ship, other than an oil tanker, is not required to carry a pilot if the master holds a master's pilotage exemption. Any applicant is entitled to a master's pilotage exemption if the application is made in accordance with section 35 of the Maritime Transport Act 1994 and the Director is satisfied that the applicant complies with requirements such as a valid master's certificate for the ship type, local training and knowledge, and safety considerations. If the Director declines an application made in accordance with section 35 of the Maritime Transport Act 1994, the applicant may appeal against that decision to a District Court.

91. While the Director may take the environmental sensitivity of the area and navigation hazards into account when setting conditions for a certain pilotage area or ship type, the Director must grant an exemption once those conditions are met.
92. The process allows the Director to assess the qualifications and experience of the master for a particular ship type and area. This function is often partly delegated to the local harbourmaster.
93. The process provides limited scope for the Director to impose conditions upon a specific operation to minimise the likelihood of an incident and the potential consequences.
94. The process does not allow the Director to assess whether the risk to safety will be increased in a particular instance. As the consequences of an accident may be severe, it is not considered that it is in the interests of maritime safety or marine protection to extend the master's pilotage exemption scheme to oil tankers at this time. Hence this is not the preferred option, even though it could potentially bring cost savings of about \$3,000 per week to the operators of the *Awanuia*.

(ii) Section 47 exemption: preferred option

95. This option would amend the rules to allow the Director to grant an exemption under section 47 of the Maritime Transport Act 1994 from the requirement in the Rule to carry a pilot on a bunker barge.
96. Section 47 provides a mechanism whereby the Director can consider applications against criteria laid down in the Act. There is no obligation on the Director to grant an exemption and there is no right of appeal. The Director can apply conditions to any exemption granted, and exemptions would usually have a limited period of validity.
97. Under section 47 the Director has to be satisfied that the action taken, or provision made, is as effective, or more effective, than actual compliance with a specific requirement in the rules. In addition, the Director has to be satisfied that the risk to safety will not be significantly increased. The Director may impose any conditions he/she considers appropriate.
98. The process allows the Director to assess the whole operation of a bunker barge, including the qualifications and experience of the master, local conditions, the technical specifications of the bunker barge, operating procedures and other safety precautions. The Director can consult with the local harbourmaster when assessing any application. The Director can also determine whether an exemption may be appropriate for some pilotage areas or operations and not for others, so is considered more suitable in this situation.
99. This option would take into account the particular operation of bunker barges and allows the Director to be fully satisfied that the risk to safety is not increased if no pilot is carried. It would also allow the operator of a bunker barge to potentially make cost savings.
100. By way of example, the Port of Singapore sets standards for bunker barges which operate within those limits. Bunker barge masters can seek an exemption from pilotage for such vessels operating within port limits. More stringent requirements apply for larger bunker tankers. There are over 60 bunkering operators and some 160 licensed bunker barges in Singapore.

101. Currently only one bunker barge is operating in New Zealand and not many new bunker barge operations are expected. A totally new approval system for bunker barges is not warranted and the proposed process would allow the Director to consider the whole operation.
102. The proposed amendment pre-empts the introduction of the full replacement rules by an estimated six months, and brings current maritime rules in line with the wider policy direction on pilotage. The amendment enables the operator of the *Awanuia* to potentially save costs, estimated at \$78,000 for six months.

Consultation

103. On 3 November 2007, Maritime New Zealand published a notice in each of the daily newspapers in Auckland, Wellington, Christchurch and Dunedin inviting comments on the proposed fully revised version of maritime rules Part 90 replacing the current rules. A notice was also published in the *New Zealand Gazette* on 1 November 2007, with electronic and hard copies being sent to around 130 interested parties. Comments on the draft Part were requested by 19 December 2007.
104. Fifty-eight submissions were received with at least 13 addressing the specific provision in respect of pilotage requirements for bunker barges.
105. Submitters almost universally supported the change and some supported the application of the pilotage exemption regime to bunkering operations. A number of submitters suggested that the definition of “bunker barge” in the Rule needed to be clarified and also that a size limit (length or tonnage) should be applied to any such vessels covered by this provision.
106. Following a review of the initial submissions and further informal consultation, the provision relating to section 47 exemptions for bunker barges was also refined. A further round of targeted consultation was carried out in June 2009 (not a public consultation) with a revised draft and Invitation to Comment being issued to 95 interested parties, including all original submitters.
107. A total of 35 submissions were received as a result of this consultation. Only one submission was received on the revised section 47 provision for bunker barges. The submitter, representing the operator of the new Auckland bunkering vessel *Awanuia*, wished to ensure that the scope of any exemption able to be granted under the new provision should be sufficient to exempt the master of *Awanuia* from carrying a pilot during all operations within a pilotage area. The proposed amendment will allow an exemption to be considered for any pilotage area but does not obligate the Director to grant one if the section 47 criteria cannot be met.

Conclusions and recommendations

108. The preferred option provides a mechanism to assess each case for an exemption from pilotage for an oil tanker used as a bunker barge on its merits against stated criteria ensuring that the risk to navigational safety is not significantly increased as a result. At the same time it allows the operator of a bunker barge to reduce unnecessary costs. Because of the severe consequences of an oil spill any option cannot reduce the level of safety.
109. By implementing the Rule Amendment earlier, the current maritime rules will take bunkering barges into account and allow an operator to potentially lower ongoing costs.

Implementation

110. The proposed option would be given effect by amending maritime rules 90.3 and 90.5.
111. The making of the amendment rules does not imply that a pilotage exemption will be granted to the operator of the Awanuia as a matter of course. The Director will be able to consider an application for an exemption from the rules and take all relevant matters into account.
112. If an exemption is granted, there will be an expectation that that exemption will continue when the revised Part 90 comes into force. In that case, consideration will need to be given as to how the exemption is renewed.
113. The objective of the proposal is to allow businesses to reduce compliance costs without compromising safety.
114. The preferred option is in line with the proposed fully revised version of pilotage rules and does not affect any other maritime rules or legislation.

Monitoring, evaluation and review

115. Maritime New Zealand and the Ministry of Transport will continue to monitor the rules and review any concerns when considering the annual rules programme.

Part 200: Offshore Installations – Discharges

Status quo and problem definition

116. Offshore installations are used in the New Zealand Exclusive Economic Zone (EEZ) for the exploration and exploitation of mineral resources. Currently, there are seven permanent offshore installations. These are platforms and Floating Production, Storage and Offloading facilities (FPSO),¹ as well as a small and fluctuating number of offshore installations involved in exploration and development activities. The permanent installations are:
- Maui platforms A and B – gas and condensate
 - Tui – FPSO *Umuroa* – oil
 - Maari – FPSO *Raroa* and well-head platform – oil
 - Kupe – gas platform
 - Pohokura – gas platform
117. Maritime New Zealand has information indicating that about ten operators are planning to drill in New Zealand continental waters over the next two years
118. Since Part 200 (2006) came into force, a number of discharge management plans have been approved for both exploration and exploitation of mineral resources off New Zealand's coast, as well as a large number of amendments to existing plans. Through this experience a number of issues arose where it was considered that the requirements of the rules, and in some cases definitions of terms used in the rules, were not sufficiently clear. This resulted in confusion for applicants and officials processing applications, and multiple enquiries from industry.
119. Additionally, a number of the provisions in the rules did not adequately take account of the realities of standard industry practice, such as the staged development of installations and the volumes and types of harmful substances used on installations. It has also been determined that there is a greater need for inspection of offshore installations at various stages of their operations than was previously envisaged or allowed for in the rules.
120. Internationally, limits on the oil-in-water content in production water are significantly lower, for example in Western Australia and under the Convention for the Protection of the Marine Environment of the North-East Atlantic.
121. There have been a number of incidents occurring during offshore operations that have involved pollution incidents by oil or harmful substances. Some of these incidents can be traced back to failure by operators to properly implement their approved discharge management plans, or a lack of understanding of the requirements of Part 200. As such it was felt that provisions around Part 200 requirements other than the content of the discharge management plans, such as provision of advice on exercises and surveys, were not adequately addressed in the existing rules.

¹ A Floating Production, Storage and Offloading (FPSO) unit is a floating facility used by the offshore industry for the processing and storage of oil and gas, until the oil or gas can be offloaded onto a tanker or transported through a pipeline. FPSOs are often conversions of oil tankers.

122. On 23 October 2007 a spill of 23 tonnes of oil from *FPSO Umuroa* resulted in oiling of 13 kilometres of Taranaki coastline south of Okato. The spill was caused by a failure on the facility to properly monitor and control the oil-in-water content in production water. The operator of the Tui oilfield, AWE Limited, and Prosafe Production (the operator of the FPSO) were found to have breached the Maritime Transport Act 1994 and were fined \$105,000. AWE Limited met the cost of the \$115,000 spent by the regional council on the clean-up.
123. This incident indicated the need for the rules to provide for the continuous monitoring, recording and reporting of oil-in-water content in production water; and the requirement for immediate cessation of discharges where high concentrations are detected. The spill also highlighted the importance of comprehensive data on the dispersibility of produced oils.
124. When Part 200 came into force for the Maui platforms in December 2007, the operator was unable to meet oil-in-water content in production water for technical reasons. As a result, the approval given by Maritime New Zealand to the platforms' discharge management plan was conditional on a programme of remedial action and monthly reporting of progress.
125. The experience gained in monitoring the production water discharges before they were brought back into compliance helped formulate additional recording and reporting processes oil-in-water content in production water.
126. On 17 April 2008, 0.6m³ of hydrotest water containing fluorescein sodium (0.03 litres) and metabisulphate (0.3 litre) was discharged from flexible flowlines on the deck of the pipeline laying vessel *Toisa Proteus*, in the vicinity of the submerged turret production buoy in the Maari oil field.
127. The incident highlighted that Part 200 was designed on the assumption that the discharge management plan requirements would apply to a fully functioning installation. Part 200 currently does not recognise the staged nature of operations at the beginning and end of the life of a field.
128. On 27 June 2008 a small quantity of biocide from the deck of Maari well-head platform was discharged into the sea, when heavy rainfall dissolved a quantity of the corrosion inhibitor as it was being readied for insertion in the main chords of the platform's jacket.
129. The biocide incident, the discharge of hydrotest water, and a further non-compliance involving the discharge of untreated galley waste from the Maari oil field well-head platform during installation all highlighted failures by the operator's contractors. These incidents also highlighted that operators are not always ensuring adequate training of responsible personnel.
130. In order to minimise the compliance burden, the level of detail that is to be included in discharge management plans needs to be clarified.

Objectives

131. The objective of the rules is to prevent pollution of the marine environment from discharges of harmful substances associated with the operation of offshore installations used in mineral exploration and exploitation, by clarifying the applicable rules.

Regulatory impact analysis

132. Analysis has led to the identification of three options:

- (i) an amendment to the advisory circular explaining the marine protection rules
- (ii) an amendment to the marine protection rules
- (iii) implementation of a revised version of the Part 200 of the marine protection rules.

(i) Amend the advisory circular

133. The advisory circular could be amended to improve clarity on the rules provisions. This would still leave some of the identified problems unresolved, such as elements in the required content of discharge management plans and notification of certain information to Maritime New Zealand.

(ii) Amend the Marine Protection Rules

134. Another option is to amend Part 200 to clarify some of the provisions and give full effect to the updated requirements for discharge management plans and other elements of discharge management from offshore installations.

135. Targeted but disjointed amendment of Part 200 does not take the opportunity to address other issues with the clarity or navigability of the current rules at the same time.

(iii) Implement revised Marine Protection Rules: preferred option

136. The preferred option is to implement a revised version of Part 200 to improve the clarity of the marine protection rules, and give direct and full effect to the amended requirements for the discharge management plans and other elements of discharge management from offshore installations.

137. Specifically, the revised rules will address the following issues:

Status quo and problem	Proposal – preferred option	Costs (government, society, industry)	Benefits (government, society, industry)
No recognition given to the staged nature of operations at the beginning and end of the life of a field. Uncertainty regarding scope of application of rules.	Extend the definition of operations to include commissioning and decommissioning activities.	No additional costs.	Increased certainty benefits the industry. Better controls benefit the industry, the environment and other users of the marine environment.
No predictability on inspections and audits of installations.	Specify the requirement for inspections and audits of installations.	No additional costs.	More coherent and self-contained scheme, benefitting the industry and Maritime New Zealand as the administrator.
No spill notification	Expand the spill	Insignificant costs	Quicker and more

requirements for harmful substances other than oil may result in adverse effects on the marine environment.	notification requirement to include harmful substances other than oil.	to industry through staff and management adapting to new requirements.	effective spill response, benefitting the industry, government involved in response, local residents, fishing and tourism industries and the environment.
Current limits of oil-in-water content in production water are not in line with international best practice and the levels achieved by operators of offshore installations.	Amend the monthly average and reporting trigger concentrations oil-in-water content in production water and process drainage and change them from milligrams per litre (mg/L) to parts per million (ppm).	No additional compliance costs. The industry is well versed in the implications of the change. No concerns were raised about the technical feasibility of meeting the more stringent requirements.	Lower reporting trigger limits will aid Maritime New Zealand in monitoring discharges. Lower oil-in-water content in production water will benefit the marine environment and its users.
Failure to properly monitor and control the oil-in-water content in production water.	Additional monitoring and reporting of production water discharges.	The new requirements will have cost implications in terms of management and staff time in adapting to the new regime. They are not considered to be significant.	Quicker response to increased oil-in-water content in production water. Ability to monitor and limit oil-in-water content in production water, benefitting the industry, government involved in response, local residents, fishing and tourism industries and the environment.
Data on the dispersibility of produced oils is inadequate to respond to spills at times.	Detailed guidance on dispersant testing.	Potentially minor increased testing costs for industry.	Increased level of detail aids the industry in instructing testing laboratories. Quicker and more effective spill response, benefitting the industry, government involved in response, local residents, fishing and tourism industries and the environment.
Operators do not always ensure adequate training of	Increase requirements for training of	Insignificant costs to industry as training is already	Personnel are adequately trained, improving safety and

responsible personnel.	personnel and provision of records of training and exercising.	provided, the additional requirements will simply ensure this is more timely and better documented. Minor additional costs to the industry in maintaining training records.	pollution control on offshore installations, benefitting the industry, the environment and other users of the marine environment. Maritime New Zealand can more easily ensure compliance with training requirements.
Uncertainty whether discharges of oil (and other harmful substances) are having any long term measurable effects.	Requirement for environmental monitoring.	Additional expenditure by industry. Exact costs are unknown and will be scaled to the extent and longevity of the operation.	Greater knowledge of long-term effects will aid the industry and government to more adequately manage offshore installations for the benefit of the marine environment and its users.
Uncertainty on level of detail that is to be included in discharge management plans, particularly information pertaining to the properties of oil and other harmful substances produced or used on the installation.	Clarify the level of detail that is to be included in discharge management plans, particularly information pertaining to the properties of oil and other harmful substances produced or used on the installation.	No additional costs.	Reduce costs for the industry as appropriate threshold for harmful substances held in small quantities is specified. Reduce processing costs for officials by reducing the number of assessments required for insignificant amounts of substances.

138. One operator is undertaking significant engineering work on board its FPSO to address problems in meeting the oil-in-water content in production water specification under Part 200. Although these problems were a driver for some of the amendments included in the draft rules, the remedial work is happening already and is not a consequence of the amended Part 200.

139. Overall, the revised version of Part 200 should ensure greater protection of the marine environment, also benefitting local residents, and the fishing and tourism industries.

Consultation

140. Maritime New Zealand carried out public consultation in accordance with the requirements of section 446 of the Maritime Transport Act 1994.

141. Seven written submissions were made on the draft Part 200. Submitters were the Taranaki Regional Council, Te Ohu Kaimoana (established under the Māori Fisheries Act 2004), four operators of offshore installations and one industry expert. All submissions, along with oral comments previously received from regional councils during the preparation of the draft amendments, were considered.
142. The offshore installation operator most affected by the proposed changes has informed Maritime New Zealand that it appreciated the manner in which stakeholder interests and submissions were addressed. The proposed changes and additions satisfied the operator's key expectations.

Conclusions and recommendations

143. Implementing a revised version of Part 200 is the preferred option. It will most effectively respond to concerns raised by recent incidents on offshore installations. It will clarify the applicable rules to prevent pollution of the marine environment from discharges of harmful substances associated with the operation of offshore installations used in mineral exploration and exploitation.

Implementation

144. A revised version of Part 200 will implement the preferred option.
145. A communication strategy has been developed by Maritime New Zealand to inform the industry of the changes contained in the proposed rules. Maritime New Zealand will revise reference material such as advisory circulars and website information accordingly.
146. The upcoming review of the Maritime (Offences) Regulations 1998 and the Marine Protection (Offences) Regulations 1998 will take into account any new numbering of the rules. The proposed rule amendment does not affect any other marine protection rules or legislation.
147. The preferred option gives clarity on how the requirements and powers under the Maritime Transport Act 1994 will be applied to offshore installations.
148. Maritime New Zealand will monitor data received from off-shore installations and work with the offshore industry to ensure that requirements are complied with. In case of a serious breach of the Maritime Transport Act 1994, Maritime New Zealand will prosecute the offender.
149. The operator of an offshore installation will respond to any spill of harmful substances in the first instance, with the regional council or Maritime New Zealand responding to larger spills as required. This corresponds to existing provisions of the Maritime Transport Act 1994 governing responses to oil spills and spills of other harmful substances.

Monitoring, evaluation and review

150. Maritime New Zealand and the Ministry of Transport will continue to monitor the rules and review any concerns when considering the annual rules programme.