

Regulatory Impact Statement

Maritime Rule Part 34 (Medical Standards)

Agency Disclosure Statement

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

It provides an analysis of options:

- To align New Zealand's medical standards for seafarers with the forthcoming amendments to the International Maritime Organization's (IMO) *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 (STCW)*.
- To introduce a standard for monocular vision.
- To improve the clarity and coherence of the Maritime Rules.
- To address the risk to the health and safety of seafarers posed by fatigue resulting from sleep disorders.

The preferred option is consistent with the Maritime Transport Act 1994 and other Maritime Rules. The proposals have implications for existing seafarers renewing expired medical certificates and new seafarers in their pre-sea medical examination.

The proposed rule will not impair private property rights, or the incentives for businesses to innovate and invest; or override any of the fundamental common law principles (as referenced in chapter 3 of the Legislation Advisory Committee's *Guidelines on Process and Content of Legislation*). The Rules are consistent with the government's August 2009 statement *Better Regulation, Less Regulation*.

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Executive Summary

1. The proposed amendment to Part 34 (Medical Standards), which will make consequential amendments to Part 32 (Ships' Personnel Qualifications), includes the following actions.
 - Shift all requirements for the medical standards of seafarers from Part 32 to Part 34.
Rationale: To improve clarity and facilitate better organisation of material.
 - Make the following amendments to vision and eyesight standards:
 - Reduce visual acuity standards
 - Require optometrists to screen for eye disease when conducting an examination for the certificate of competency.
Rationale: To align with New Zealand's international obligations under STCW, as amended in June 2010.
 - Introduce a standard for monocular vision.
Rationale: To increase transparency and reduce the potential for inconsistent decision making.
 - Add sleep disorders to the appendix of conditions which medical practitioners should consider when assessing the medical fitness of seafarers.
Rationale: To address the health and safety risk posed by seafarers with fatigue resulting from, or exacerbated by, the presence of a sleep disorder.
2. The only change which will result in additional cost is the amendments to eyesight and vision testing standards which are required to align with STCW requirements. The annual cost, which will be met by the seafarers, is approximately \$24,535 per annum.

Status quo

3. Maritime rules are made by the Minister of Transport under the Maritime Transport Act 1994. Rules are not statutory regulations, but Cabinet has agreed that the Minister of Transport would notify Cabinet of the content of any rule on the transport rules programme before signing the rules into law. Minor and technical rules do not need to be considered by Cabinet.
4. Parts 32 and 34 both specify the requirements for the medical standards of seafarers who fall under the coverage of the International Maritime Organisation's *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 (STCW)*.
5. The main purpose of Part 32 is to set standards for maritime qualifications and only refers to medical standards in this context. The main Rule part for medical standards is Part 34. The present method of splitting these standards across two parts is not the optimal way of organising material and lacks clarity.
6. Part 34, which is divided in to two sections, sets the requirements for the medical examination of seafarers. Section 1 requires all seafarers under the age of 18 years to undergo a medical examination prior to their employment on a ship. This requirement

applies to seafarers employed on New Zealand ships (other than restricted limit ships) and to seafarers engaged on a foreign ship in New Zealand. Section 1 covers New Zealand's obligations under the International Labour Organisation (ILO) *Medical Examination of Young Persons (Sea) Convention, 1921*.

7. Section 2 of Part 34 applies to seafarers on New Zealand ships that fall under the International Convention for the Safety of Life at Sea (SOLAS)¹ coverage (foreign going passenger ships, non-passenger ships of 500 gross tonnes or more, and other New Zealand ships of 45 metres or more in length which proceed beyond restricted limits). All such seafarers are required to pass a medical examination by an approved medical practitioner. Certificates of medical fitness are valid for a period of 2 years. Section 2 implements the requirements of STCW. Currently, these medical standards reflect the STCW amendments made in 1995.
8. Approximately 9120 seafarers hold current certificates of medical fitness.
9. The current method for identifying sleep disorders relies on the seafarer identifying sleep problems themselves and disclosing it on a checklist of medical conditions. This checklist, which is included in the Advisory Circular², is filled out as part of the medical examination process. Advice from the Chief Medical Officer at the Civil Aviation Authority suggests that the latter approach is known to lead to a very low positive response rate and is not consistent with best medical practice.
10. The proposed amendments to Part 34 introduce a standard for monocular vision. Although the Advisory Circular states that the Director of Maritime New Zealand (the Director) may accept applications for an exemption to the eyesight requirements for those with monocular vision, there is currently no standard for monocular vision that is explicitly stated anywhere in the Maritime Rules.

Problem Definition

11. The following problems have been identified and are addressed by the proposed amendments to Part 34:
 - Specifications for the medical standards of seafarers are found in two rules, which reduces clarity and ease of use.
 - If New Zealand retains the current standards for eyesight and vision for seafarers, it will fail to adhere to the revised STCW standards that come in to force on 1 January 2012.
 - The current method of identifying sleep disorders in seafarers does not reflect best medical practice.
 - The Maritime Rules do not explicitly state a standard for monocular vision.

¹ The **International Convention for the Safety of Life at Sea (SOLAS)** is an international maritime safety treaty of which New Zealand is a signatory. It is generally regarded as the most important of all international treaties concerning the safety of merchant ships.

² Maritime New Zealand Advisory Circulars are issued with Maritime Rules to provide assistance and explanation about the standards and requirements set out in the rules. The notes in the Advisory Circulars should not be treated as a substitute for the rules themselves, which are the law.

Objectives

12. To align New Zealand's medical standards for seafarers with the forthcoming amendments to the International Maritime Organization's (IMO) *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 (STCW)*.
13. To introduce a standard for monocular vision.
14. To improve the clarity and coherence of the Maritime Rules.
15. To align the method for recognising sleep disorders in seafarers with current best practice.

Regulatory impact analysis

Shift all requirements for the medical standards of seafarers from Part 32 to Part 34.

16. Part 32 currently includes some of the eyesight and testing requirements which means that specifications for medical standards are scattered across two separate rules. By shifting these to Part 34, all medical requirements are provided in one place, facilitating greater clarity and better organisation of material.

Amend both eyesight and vision testing standards in Part 34 to align with the STCW-2010 requirements.

17. Changes to eyesight and vision testing in Part 34 will apply to those who require a certificate of competency. Certificates of competency are required for those positions where the seafarer works on the deck of a ship and for engineers. For a seafarer working on the deck of a ship, the certificate of competency assessment must be issued by an approved optometrist. The eyesight examination for certificates of competency for engineers is assessed by medical practitioners.

Visual Acuity Standards

18. The changed international standards of unaided and aided visual acuity apply to masters, mates, watchkeepers and lookouts.
19. Under the new international standards, the unaided visual acuity for masters, mates, watchkeepers and lookouts have reduced eyesight requirements as per the table below.

| | Current Requirements | Proposed Requirements |
|--------------------|-----------------------------|------------------------------|
| Unaided | | |
| First eye | 6/12 | 6/60 |
| Second (other) eye | 6/24 | 6/60 |
| Aided | | |
| First eye | 6/12 | No change |
| Second (other) eye | 6/9 | 6/12 |

20. The revised STCW standards recognise that the both aided and unaided visual acuity standards can be reduced without compromising safety standards. The proposed change will formalise the current practice of the Director issuing exemptions to the unaided visual acuity standard for deck officers, essentially meeting the proposed standard.
21. Introducing these new standards will not create any additional cost to seafarers, approved practitioners or approved optometrists as this change is accommodated by their existing practice and equipment.

Eye disease testing

22. The revised STCW requirements include screening for any impairment or disease, which includes assessment for eye disease. To align with the STCW requirement, optometrists will be required to screen seafarers for serious and/or progressive eye disease when conducting an examination for a certificate of competency.
23. As the eyesight and vision assessments are only required when a certificate of competency is issued, but not when it is revalidated, any costs that are incurred will only be on a one-off basis and will not apply to those who already hold a certificate of competency. Maritime New Zealand (MNZ) has indicated that approximately 870 new certificates of competency are issued per annum.
24. Additional costs will not be incurred for all seafarers. The proposed amendments to eyesight screening apply only to those seafarers who require a certificate of competency, and additional testing and costs will only be incurred where the basic examination indicates that there may be an issue.
25. It is anticipated dilated eye examination will be required for approximately 30-50 percent of seafarers under 50 years of age, and nearly all seafarers over 50 years of age. The estimated cost of a dilated eye examination is \$30 – 40 per dilation. It is anticipated that 10 percent of seafarers will require a visual field test, at an estimated cost of \$60-80.
26. The total cost of implementation, which will be met by seafarers³, is approximately \$24,535 per annum⁴.
27. By implementing this proposed rule change, seafarers benefit from early detection of potential eye disease and identification of previously undiagnosed binocular difficulties. There are also benefits to maritime safety as undetected eye health problems can contribute to the occurrence of accidents.

³ Part 34 explicitly states that any fee for the medical examination is payable by the seafarer. This includes eyesight and vision testing.

⁴ This data has been calculated using the data contained in paragraph 26 (as provided by MNZ). It is estimated that 35 percent of seafarers are over 50 years of age, reflecting the aging seafarer population. Where a range of values (for example, 30-50 percent) has been provided, the midpoint has been used for calculation purposes. The phrase 'nearly all' has been calculated at 99 percent. All figures were rounded to the nearest whole number when necessary.

Potential implications of non-compliance with STCW- 2010

28. Changes to the medical assessment requirements for seafarers who fall under the coverage of STCW were agreed by the International Maritime Organization (IMO) in June 2010. As a State party to STCW, New Zealand is required to implement the changes agreed to via the tacit acceptance procedure⁵ by 1 January 2012.
29. The recommended amendments to visual acuity and eyesight testing are a response to the changes of STCW requirements. The implementation of these amendments will align New Zealand with its STCW obligations.
30. If New Zealand does not meet its obligations under STCW this could potentially lead to the removal of New Zealand from IMO's 'White List,'⁶ but the extent to which this is likely is not quantifiable.
31. In the case that New Zealand was removed from the 'White List,' this would have an impact on New Zealand's maritime education providers.
32. The New Zealand Maritime School estimates that approximately 430 New Zealand certified officers and traditional ratings work on foreign flagged vessels or on New Zealand vessels working in international ports. Additionally, 1500 New Zealand residents work on cruise ships and super yachts where they are required to have STCW basic training certification. Direct seafarer employment brings in \$60 - \$100 million annually. For New Zealand maritime schools to be able to compete on the international market they must be able to have their graduates certified to current international standards. At present maritime training for STCW certification brings in approximately \$15 million annually.

Introduce a standard for monocular vision.

33. There is currently no standard for monocular vision that is explicitly stated anywhere in the Maritime Rules. However, the Advisory Circular⁷ which accompanies Part 34 states that the Director may accept applications for an exemption to the eyesight requirements for those with monocular vision.
34. The proposed amendment makes explicit the issues the Director will take into account when considering whether or not a seafarer with monocular vision can work at sea, while protecting health and safety by requiring the Director to be satisfied that the seafarer can cope with the range of tasks likely to be encountered at sea. Explicitly stating the monocular vision standard increases transparency and reduces the potential for inconsistent decision making.

⁵ The tacit acceptance procedure was adopted in 1973 to facilitate speed and simplicity when making technical modifications to Conventions. Instead of requiring that an amendment shall enter into force after being accepted by a certain proportion of parties, the 'tacit acceptance procedure' provides that an amendment shall enter into force at a particular time unless, before that date, objections to the amendment are received from a specified number of parties.

⁶ The 'White List' identifies countries that have demonstrated a plan of full compliance with the STCW Convention and Code when audited.

⁷ Maritime New Zealand Advisory Circulars are issued with Maritime Rules to provide assistance and explanation about the standards and requirements set out in the rules. The notes in the Advisory Circulars should not be treated as a substitute for the rules themselves, which are the law.

Add sleep disorders to Appendix 1 – Medical conditions to be considered

35. The proposed rule amendment will add sleep disorders to the appendix of conditions which general practitioners must consider when assessing a seafarer in their medical examination.
36. Inclusion of sleep disorders in the appendix requires the medical professional to actively consider if a sleep disorder is present. Currently, sleep disorders are referred to within the Advisory Circular but not within the rule itself, which is the law. The process for identifying sleep disorders relies on self-disclosure from seafarers via a checklist covering 42 conditions. Advice from the Chief Medical Officer at the Civil Aviation Authority suggests that the current approach is known to lead to a very low positive response rate and is not consistent with best medical practice.
37. The proposed rule amendment does not create a new condition to be examined. It simply implements a more effective way for examining for sleep disorders by giving medical practitioners a more active role. Having sleep disorders in the appendix, as proposed, aligns with the current practice in both aviation and road transport.
38. While there are existing provisions within the Maritime Rules to address fatigue, they address the causes of fatigue that are well known in the maritime industry, such as long hours and a noisy sleep environment. They are not designed to identify or manage seafarers with sleep disorders.
39. The proposed rule change responds to a recommendation from the Transport Accident Investigation Commission (TAIC). In 2003, TAIC issued a report that recommended that medical practitioners should assess prospective seafarers for evidence of sleep disorders when conducting the medical examination.

Options

Option one – preferred option

The preferred option is to implement the following actions.

From 1 April 2011:

- a) *Shift all requirements for the medical standards of seafarers from Part 32 to Part 34*
- b) *Introduce a standard for monocular vision.*
- c) *Add sleep disorders to Appendix 1 – Medical conditions to be considered.*

From 1 January 2012:

- a) *Amend both eyesight and vision testing standards to align with the STCW-2010 requirements.*

40. Shifting all requirements for the medical standards of seafarers from Part 32 to Part 34 will improve clarity and facilitate better organisation of material.
41. The primary rationale for amending the eyesight and vision standards is to align with the revised STCW standards so that New Zealand complies with international requirements and will avoid any implications that may arise from failing to do so, as

discussed above. The residual benefit of this proposal is the health and safety benefits that result, as discussed previously.

42. The cost of implementing the STCW 2010 requirements for eyesight and vision are approximately \$24,535 per annum⁸. The cost of implementing these standards at the same time as the remainder of the rule would create an additional cost approximately \$18,400⁹. For this reason, the amendments to align with STCW requirements will come in to force on 1 January 2012, while the remainder of the changes will come in to force on 1 April 2011.
43. Introducing a standard for monocular vision will increase transparency and reduce the potential for inconsistent decision making.
44. Introducing sleep disorders to the appendix of conditions which medical practitioners examine reflects best practice for the identification of sleep disorders and aligns with current practice in both aviation and road transport. In the Ministry's judgement there is an issue here that needs to be addressed, but the scale of the problem is unknown. The preferred option has been identified as it provides a low cost and compliant way of addressing the unknown risk. The Ministry will monitor the effectiveness of the rule and scale of the problem and alert the Minister to further findings, if appropriate.

Option two – retain the status quo

45. Retention of the status quo will mean that New Zealand will fail to adhere to its international obligations under STCW, as amended in June 2010. As discussed above, failure to meet international requirements can potentially have an impact on New Zealand's international reputation and the status of New Zealand's maritime education sector, which is a lucrative export market.
46. Failure to define a specific standard for monocular vision will continue the present situation where the Director must consider exemptions for those with monocular vision, which creates administrative costs. Without this standard, there is also the potential for inconsistent decision making and a lack of transparency.
47. Failure to change process for identifying sleep disorders continues the situation where the maritime sector does not follow the best practice followed in the land and aviation sectors for recognising this condition, which is potentially detrimental to safety.

Consultation

48. I am satisfied that Maritime New Zealand (MNZ) has publically notified and consulted on the proposed rule on my behalf in accordance with the statutory consultation requirements for rules.
49. The proposed rule was publicly advertised and invitations to comment on the draft rules were sent to all interested parties that responded, and to all other parties recorded on Maritime New Zealand's consultation lists for rules. All written and oral

⁸ The summation of the aggregate cost of eye dilation and visual field test, based on estimates discussed previously (see footnote 2). No additional costs are incurred from reducing the visual acuity standard.

⁹ This figure is calculated as three quarters of the annual figure to represent the nine months from April – December 2011. It has been rounded to the nearest hundred.

submissions were considered and, where appropriate, the draft rule was amended to take the submissions and comments received into account.

50. The proposal to amend Part 34: Medical Standards was released for public consultation on 17 January 2008, with submissions closing on 11 April 2008. Ten written submissions were made on the draft Part 34, two being identical and treated as one submission.
51. The New Zealand Association of Optometrists Inc and the Optometrists and Dispensing Optician Board opposed the reduction of visual acuity standards. However, the new visual acuity standards are compliant with world standards, and formalise the situation that the Director was applying by way of exemption, thereby removing this compliance cost on industry. The IMO notes that the proposed standards do not reduce safety.
52. On 17 March 2009, MNZ issued a supplementary consultation notice on a proposal to add sleep disorders to the appendix listing conditions approved medical practitioners should examine for. Two submissions were received.
53. Treasury, Ministry for Economic Development, Department of Labour, Te Puni Kokiri and Maritime New Zealand (MNZ) have been consulted on this paper. The Department of the Prime Minister and Cabinet has been informed. The departmental consultation period ran from 12 – 26 January 2011.
54. The proposed rule was revised, taking into account the submissions received.

Conclusions and recommendations

55. The recommendation is to implement the preferred option in its entirety (that is, all four parts). The preferred option is to implement the following actions.
 - Shift all requirements for the medical standards of seafarers from Part 32 to Part 34.
 - Amend both eyesight and vision testing standards to align with the STCW-2010 requirements.
 - Introduce a standard for monocular vision.
 - Add sleep disorders to Appendix 1 – Medical conditions to be considered.

Implementation

56. A revised version of Part 34 will implement the preferred option. The proposed rule amendment does not affect any other maritime rules or legislation.
57. Guidance material for both optometrists and medical practitioners will be updated. The New Zealand Medical Council has offered to place guidance material for medical practitioners on sleep disorders on its website. The Advisory Circular is being re-written and will be available from MNZ's website.

Monitoring, evaluation and review

58. The changes will be monitored through MNZ's on-going interactions with its approved optometrists and medical practitioners. The Ministry will report to the Minister of Transport and Finance on fatigue related accidents in the maritime

sector, and specifically the effectiveness of the rule, after this rule has been in place for two years.

59. No formal plans for monitoring of the effects of the other amendments are planned, as they are relatively minor and largely align the rule with international standards.