

Regulatory Impact Statement

Maritime Operator Safety System

Agency Disclosure Statement

This regulatory impact statement has been prepared by Maritime New Zealand (Maritime NZ) for the Ministry of Transport. It recommends a new safety regulation framework for the operation of domestic commercial maritime transport activities. The focus of the proposed system is on maritime transport operators identifying and taking responsibility for managing the risks associated with their operations. It is envisaged that this model will improve safety outcomes and address unacceptably high injury and fatality rates under the current system, in the commercial domestic maritime transport sector.

The analysis is informed by a number of reviews of the current regulatory framework (safe ship management). Maritime NZ analysed its own data and ACC data related to accident costs, and the number of safety related deficiencies found by Maritime Officers on vessels that had been recently inspected by safe ship management (SSM) companies and certified as compliant. The analysis was also informed by discussions with frontline staff and two rounds of public consultation. A consulting firm (Covec) was commissioned to carry out a cost-benefit analysis of the proposed change to a new regulatory framework. That analysis estimated that a 5 percent reduction in annual safety incidents over 20 years would reduce the social cost of fatalities, serious harm and other reported incidents by \$16.5 million in present value terms. The cost-benefit analysis omitted some of the benefits of improved safety, as detailed in this statement.

Consultation is still needed on the fees that maritime transport operators and ship surveyors would be charged under the proposed new rules. Recent decisions arising from the Maritime NZ Funding Review (particularly as they pertain to hourly rates for chargeable activities) will form the basis for the fees structure. The cost of administering the new framework had not, however, been factored into the Funding Review fee structure, which means the Funding Review hourly rates will inform but not determine the proposed MoSS fee structure.

The proposed new regulatory framework is expected to provide safety, efficiency and reputational benefits that significantly exceed the costs to government and the maritime sector. It would promote operator responsibility by requiring operators to adopt a safety system tailored to their operation, and would better target regulatory interventions. The new system will also be more efficient, avoiding duplication of functions between Maritime NZ and SSM companies.

The proposed model would remove SSM companies from the regulatory model. The seven companies affected would not however need to cease operating per se. While no longer having a role in auditing maritime operators, companies previously operating as SSM companies could continue operating as survey companies (employing recognised surveyors), or as maritime operations consultancy companies.

In terms of compliance costs, it is unlikely that maritime transport operators will pay considerably less over the lifespan of their operation, and in some instances, where an operator does not demonstrate a good compliance standard, costs will be higher. There will be fixed 'entry' costs for every operator but variable costs dependent on the

performance of the operator (for example, performance will affect the frequency of audits).

The maritime operator safety system would not impair private property rights or market competition unnecessarily given the objective, and will not override fundamental common law principles. Freedom to tailor business structures and safety systems, and incentives to operate safely will be strengthened.

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Status quo

1. The Maritime Transport Act 1994 is intended to address the safety, pollution and security risks associated with maritime transport and to comply with international conventions. A person wanting to participate in the commercial maritime system must obtain the relevant maritime document (“entry control”) and operate according to the requirements and privileges it bestows. These documents allow for regulatory oversight of safety standards for vessels, equipment, personnel and systems. In principle, this is an efficient method of safety regulation given that by their nature and location it is not in most cases possible to constantly observe maritime operations. However, the effectiveness of this statutory framework depends on how it is implemented, including through detailed requirements set out in the maritime rules (deemed regulations under the Act).
2. Safe ship management is a regulatory framework introduced in 1998 through Parts 21 and 46 of the maritime rules, to regulate the safety of domestic commercial ships. It covers fishing ships (including deep sea vessels), and most passenger and non-passenger ships that do not proceed beyond restricted geographic limits off the coast. It also covers a small number of New Zealand ships operating internationally. Altogether between 3,500 and 4,000 ships are operated under the framework. The pre-1998 framework relied on annual or periodic survey of vessels. Safe Ship Management was intended to expand regulatory oversight to safety management systems, and to place more responsibility for safety on the maritime transport industry by delegating certain regulatory functions to organisations approved by Maritime NZ (specifically SSM companies).
3. Maritime rule Part 21, section 2 requires, among other matters:
 - The Director of Maritime NZ (the Director) to approve an organisation’s SSM system if it meets the requirements of the rule and the Maritime Transport Act 1994. These include certification from a recognised accreditation body that the system is in accordance with the *New Zealand Safe Ship Management Code* (appended to Part 21).
 - Commercial ship owners to subscribe to the SSM system of an approved organisation.
 - The Director to issue a safe ship management certificate for the ship if certain requirements are met including a satisfactory audit by the approved organisation and a satisfactory survey by a surveyor engaged by the approved organisation. Under the Act, the Director must also be satisfied with the qualifications and fit and proper person status of anyone who applies for a maritime document.
 - The organisation to provide Maritime NZ with certain basic details of the ships in its system and other information from its survey and audit records that the Director may “reasonably require”.
4. Part 46 sets out the requirements for ship surveys, and for Maritime NZ “recognition” of approved organisations’ surveyors – which essentially involves a check of the applicant’s qualifications and experience, typically every five years.
5. It was originally expected that operators would form their own sectoral SSM organisations with appropriate systems, but this role was taken up by commercially-driven SSM companies. This is partly because of the costs of establishing an

approved organisation. These include requirements for International Organization for Standardization certification and capabilities in both vessel survey and auditing.

6. SSM companies charge owners an estimated \$2.3 million per annum – an average of \$1,200 - \$1,300 per vessel.

Problem definition

7. Several reviews have highlighted weaknesses in the SSM framework (see Appendix 1), as has the Transport Accident Investigation Commission.¹ More recently, the findings of the Royal Commission on the Pike River Coal Mine Tragedy, when applied to the maritime transport sector, indicate that it is timely to review the SSM regime given concerns raised by the Commission about the need for the regulator to take more responsibility for its health and safety functions. The available evidence suggests that the current framework has several fundamental problems and limitations, as set out below.

The current model is associated with unsatisfactory safety outcomes

Serious injuries on SSM vessels in the period 1998 to 2001 were less frequent than in the four years before.² However, despite a 15 percent decline³ in the maritime workforce since 1999 there has been no further improvement in the number of reported injuries. The average number of instances of harm reported to Maritime NZ over the years 2000-2010 is 4.6 fatalities, 41 cases of serious harm, and 109 other injuries each year. ACC records suggest there are many other, mostly minor injuries.⁴ The average annual social cost of all of these accidents is estimated at \$37 million. This includes a value of life estimate⁵, ongoing medical costs, lost output (the value of the injured person's lost wages), and legal and court costs. It does not include other costs such as acute medical, search and rescue or property damage costs. Nor does the average include social costs associated with marine pollution. Many vessel owners are distanced from the development of safety systems through over-reliance on SSM companies. This does not incentivise the development and promotion of a safety culture.

The current model does not provide effective and efficient oversight of commercial vessel operators

The purpose of an audit is to test the *overall* effectiveness of the safety system (which includes the vessel but also goes to the operating procedures). However, operators reported in consultation that audits undertaken by SSM company auditors

¹ For example, see: *Report 07-202, fishing vessel, Walara-K flooding and sinking, 7 March 2007; Final Report: Marine Inquiry 08-209: Loss of the rigid inflatable boat Mugwop, off the entrance to Lyttelton Harbour, 28 October 2008, February 2011; Report 06-204, fishing vessel, Kotuku, capsize and sinking, Foveaux Strait, 13 May 2008; Final Report 12-201, fishing vessel, Easy Rider, 15 March 2012.*

² *Review of Safe Ship Management Systems*, September 2002, Thompson Clarke Shipping Limited.

³ Based on Statistics New Zealand figures.

⁴ Irvine *et al* (2012), at para 2.3.

⁵ Based on the Value of a Statistical Life (\$3.8 million after adjusting for inflation), see Ministry of Transport "The Social Costs of Road Crashes and Injuries" June 2010, Table 4.1b. Used in the Covec Cost Benefit Analysis to calculate total cost, at paragraph 2.3. Maritime New Zealand estimates that each search and rescue call out to a domestic commercial vessel costs \$55,000.

are often limited to physical checks of the vessel, with little or no attention paid to the safety of operation performed on or from the vessel. Further, between 2006 and 2011, checks by Maritime NZ safety inspectors found that SSM companies detected vessel deficiencies at 62 percent of the rate detected by Maritime NZ. This suggests that both the focus of the audit and the rigour with which it is performed is not appropriate.

Further, there is an inherent conflict between the commercial and regulatory roles of SSM companies, and this has compromised rigorous regulatory oversight. The model also puts a distance between Maritime NZ as the principal regulator and the actual participants in the system. As noted in a review of safe ship management in 2002⁶:

In divesting SSM [Safe Ship Management] survey activities outside of MSA [the Maritime Safety Authority] into the hands of competing, commercially-driven SSM companies, this cannot help but create an environment conducive to surveyor “shopping” and regulatory capture....In our opinion [the current mode of oversight] does not afford the MSA with sufficient protection against regulatory capture.

8. Further to the above, the “bundling” of safety planning, survey and audit within SSM companies, and the costs of entering the market to provide these services, limits choice and allows opaque pricing – inefficiencies on the part of the ‘provider’ may therefore be masked.
9. Maritime NZ does not have sufficient information on the activities of SSM companies and operators. This hinders Maritime NZ in providing effective, independent oversight of the quality of these services and in implementing risk-based safety initiatives.
10. As a consequence of the rules applicable to SSM, there is relatively weak entry control for vessels, surveyors and operators. In many instances, vessel owners buy a standardised, off-the-shelf safety manual, and tend not to take responsibility for ensuring the safety manual is tailored for their particular operations.
11. Related concerns are that the current framework:
 - Sets up barriers to the information flows that are needed to inform effective, risk-based policy and safety promotion. Much of the information from audits and surveys does not reach Maritime NZ.
 - Has a physical, vessel-by-vessel focus with too little consideration of operational issues.⁷
 - Places responsibility for operations on vessel owners, rather than the operator, who exercises control over operations.
 - Requires cumbersome rule changes to provide for changes in best practice or for different types of operation.
12. As illustrated in Appendix 1, Maritime NZ has tried to compensate for these

⁶ *Review of Safe Ship Management Systems* (2002). Thompson Clarke Shipping Pty Limited, p165

⁷ Accidents and incidents reported to Maritime New Zealand have operational rather than physical/structural causes in 60 percent of cases. Source: Maritime New Zealand's MIDAS database.

weaknesses through greater oversight of functions mandated to safe ship management companies, more support and advice to operators, and post-accident prosecutions. Maritime NZ sometimes audits vessels' safety systems and now "inspects" every vessel six months after survey. This duplication of functions has improved information available to Maritime NZ but added costs and confused lines of responsibility without addressing the fundamental problems or noticeably improving outcomes. While, arguably, maintaining this effort could over time improve safety outcomes, it cannot fully remedy or provide a sustainable 'safety net' for the limitations and failings of the current model.

Objectives

13. The objectives of the proposed policy change are:

- **Improved safety:** a system that will improve safety outcomes, now and in the future and meet the reasonable expectations of New Zealanders and of the international community
- **Clearer lines of responsibility:** those involved in the maritime industry are accountable for a clear set of safety responsibilities. Regulatory decisions are transparent and conflicts of interest are minimised
- **Effective and efficient regulation:** a targeted, responsive, evidence-led approach that is consistent with the Maritime Transport Act and minimises duplication of regulatory effort.
- **Ease of compliance:** More direct engagement with the operator, which will result in the operator understanding applicable legislative requirements.

14. Under the Maritime Transport Act 1994, the Director of Maritime NZ must regularly review the maritime transport system to promote the improvement and development of safety and security (subsection 439(3)(b) refers). The Maritime NZ Authority must undertake its safety functions in a way that contributes to the aim of achieving an integrated, safe, responsive and sustainable transport system and promoting maritime safety. The Government's stated policies and objectives for regulation, transport and safety also provide a basis for the review.

Regulatory impact analysis

Option 1: Status quo (safe ship management)

15. As indicated above, the current regulatory framework for domestic commercial shipping does not adequately meet the policy objectives, and limits further safety improvements. Due to an ageing fleet, Maritime NZ expects the overall cost of maritime accidents to rise under the status quo.

16. The benefits of retaining the status quo are in deferring the costs of change. However, change costs are unlikely to be avoided for long, given widespread recognition of the need to improve maritime safety outcomes.

17. The evaluation of the FishSAFE initiative referred to in paragraph 31 indicates that the status quo can accommodate initiatives providing modest but measurable improvements in safety.

18. However, there is an inherent weakness in the SSM model, due to the conflict

between the commercial imperative and the safety regulatory role of surveyors and auditors. The conflict is made more acute by the fact that SSM companies, which employ most surveyors, both set the standards of survey and safe ship management and 'regulate' those standards in a commercial context. This weakness of the system is reflected in a number of TAIC marine accident reports (as per footnote 1). By way of example, the TAIC report into the *Easy Rider* incident notes: "Although the *Easy Rider* had been entered into the SSM system, it was never going to help the owner and skipper to run a safe fishing operation, because the owner did not understand the principles of safe ship management" (para 5.13 refers).

19. In previous investigations TAIC has also found "inconsistencies in the SSM system" of such seriousness that in 2007 it was recommended that there be a full review of the system to ensure it promotes and effectively regulates a safe and sustainable maritime industry consistently throughout New Zealand.

Option 2: Enhanced safe ship management

20. The current structure could be retained with incremental changes to address key problems. An incremental approach could minimise transitional costs associated with a faster and more comprehensive change to the regulatory framework.
21. A number of incremental changes could be considered, and these might collectively address some of the shortcomings and failures of the current system in respect to its capacity to deliver improved safety. Such changes could include:
 - a) Physical survey consistency and adequacy could be improved by Maritime NZ prescribing requirements for the performance of surveys and increasing its oversight of surveyors, by routinely and more closely auditing their work and providing guidance where necessary.
 - b) Maritime NZ could work closely with operators to customise safe ship management manuals to the specific needs of their operation. (SSM companies currently prepare 'off the shelf' safe ship manuals for operators).
 - c) Maritime NZ could have better and faster data collection and analysis, enabling a tighter focus on areas likely to improve outcomes. The cost would ideally be offset by resulting efficiencies.
 - d) Regulations could be made that give Maritime NZ more regulatory tools for influencing SSM companies – for example, penalties when there are poor safety outcomes and incentives when safety improves.
22. None of the above incremental changes would be without potential negative consequences unrelated to the safety outcome. In respect to a), this would duplicate a role of SSM companies, increasing costs and potentially confusing lines of responsibility for surveyors. The option of Maritime NZ working closely with operators on customising their manuals, as per b) above, would address the 'gap' between Maritime NZ and regulated parties but it would potentially confuse operators given the enduring and central role of SSM companies. In terms of c), requiring SSM Companies to supply increased amounts of data is limited by the current rules. Further, the use of the data would be constrained by Maritime NZ's limited intervention options. Option d) could greatly assist in Maritime NZ's oversight of SSM companies, and capacity to influence their performance, but it

would also add to the sum total of regulation and the number of regulatory processes rather than rationalising them.

23. Overall, incremental change would not be without administrative and other costs, and to date a series of such changes has not achieved the objective of improved safety. Further patches are unlikely to address all of the current problems and could make some problems worse and could lead to inconsistencies in legal requirements. This piecemeal approach was not supported by the industry during consultation.

24. A piecemeal approach cannot address the fundamental conflict that exists between the commercial and safety regulatory roles of SMM companies and surveyors.

Option 3 (preferred): maritime operator safety system (MOSS)

25. The proposed maritime operator safety system (MOSS) would return to a more direct Maritime NZ oversight of safety management. It offers clearer lines of responsibility and more effective and efficient regulation with more focus on prevention (through guidance, safety planning and entry control), and less duplication.

26. The key changes would be:

Change	Expected benefits
<p>Regulatory functions of approved SSM organisations replaced with:</p> <ul style="list-style-type: none"> • Maritime NZ to provide guidance for surveyors and operators • Maritime NZ to directly assess safety management plans when operators apply for an operating certificate and to directly audit compliance with these plans • Ability for surveyors and operators to contract with each other directly 	<p>Maritime NZ has more up to date information about operators, operations, surveyors and risks, which will be used to focus Maritime NZ resources where most required: e.g. research, policy, education and compliance/enforcement effort</p> <p>Operators and surveyors have the education and knowledge they need for their roles in safety management</p> <p>More rigorous and consistent regulation and enforcement of safety standards.</p> <p>Operators able to take more responsibility for safety, and able to develop their own safety system</p>
<p>Require operators to have a safety plan tailored for each operation (a Maritime Transport Operator Plan) and certified for 10 years, instead of, as now, requiring ships to belong to an approved SSM organisation and be certified for four years.</p>	<p>Those with control (operators), rather than owners, have responsibility.</p> <p>Safety plans represent what really happens in the operation, are developed and implemented by operators, and are not limited by a focus on vessels or cluttered with irrelevant material.</p> <p>Safety plans are understood and applied by relevant personnel.</p> <p>Efficiencies through multi-vessel safety plans (15-20 percent of operators), longer certification cycle, and limiting safety plans to the risks faced in the operation.</p>

Change	Expected benefits
Maritime NZ to more actively control the survey function by raising entry and survey performance standards, developing national survey guidelines, mentoring and professional development for surveyors.	Surveyors conduct vessel surveys to higher and more consistent standards.
Audit cycles to be risk-based, and audits to cover operations rather than vessels. Safe operators can expect less frequent audits.	The most risky operations and aspects of operations get the most attention. An extra incentive for operators to achieve a good safety record.
Vessel certification to be transferable on sale.	Reduced compliance costs because it will no longer be necessary to recertify a vessel where ownership transfers through sale.

27. Overall, the benefits of the new regulatory framework are expected to include increased confidence in the integrity of the maritime safety framework and a better return on the national investment in maritime safety. Maritime NZ will be better placed to implement its compliance strategy of using the right intervention method or tool, at the right time, to achieve compliance. This will help to ensure compliance with the Maritime Transport Act 1994 and international maritime convention requirements.

28. Maritime NZ commissioned Covec to carry out a cost-benefit analysis of the proposed system. Over 20 years, average annual compliance costs including Maritime NZ fees are estimated to increase by an average of \$180 per operator compared with the status quo. However, with ongoing compliance streamlined, simplified and more targeted, compliance could ultimately cost less annually than under safe ship management for many operators.⁸

29. Recent estimates of Maritime NZ's fees for application for a ten-yearly Maritime Transport Operator Certificate take account of the recommendations of Maritime NZ's Funding Review (as accepted by Cabinet), which include a transition over a six year period to full cost recovery for feeable activities. The latest but by no means final estimate for a small, single-vessel operation is in the order of \$1,400 (GST incl), with higher fees for larger and more complex operations. In keeping with the recommendations of the Funding Review, this fee level represents the first step in a transition to full recovery of Maritime NZ's costs to assess the application. However, the fees require further refinement and analysis and will be subject to consultation.

30. Covec estimated that a 5 percent reduction in annual safety incidents over 20 years would reduce the social cost of fatalities, serious harm and other reported incidents by \$16.5 million in present value terms.⁹ This was partly offset by estimated net total costs to Maritime NZ and operators over this period of \$9.22m. A 2.5 percent reduction in the social cost of safety incidents would be enough to cover these

⁸ See Irvine *et al* (2012) at 3.2.8.

⁹ Net present values estimated over 20 years and assuming a discount rate of 8 percent, and using Ministry of Transport standard values.

costs.

31. FishSAFE is an industry-government partnership introduced in 2006 that educates fishers in safety and rewards them for attending courses through lower ACC fees. An evaluation of the programme suggested that it was associated with a greater than 5 percent reduction in the rates of fishing vessel accidents and injuries.¹⁰ Given the key role of education and incentives in this voluntary programme, a regulatory framework that improves education, incentivises good operator conduct through reduced audit frequency, and also strengthens entry control, auditing and surveying, should also be able to reduce accidents and injuries by more than 5 percent.
32. The administrative costs and benefits that were estimated for Covec included \$2 million for a new information system¹¹, a further \$2 million of additional one-off costs, and a \$1.2 million increase in annual operating expenditure (paid for mostly through industry fees and levies). Inevitably, these estimates are subject to change as processes are refined and contracts negotiated. However, Maritime NZ is confident that the Covec analysis is conservative and understates the likely overall net benefits of the new regulatory framework.
33. In terms of the compliance costs of individual operators, over the lifetime of an operation these could reduce significantly; reduce; increase, or increase significantly. Subject to paragraph 29, no specific fees have been estimated, but the recent decisions of Government to increase the hourly rate for other chargeable Maritime NZ activities will inform the rate at which fees will be calculated. That rate, which will rise progressively to \$235 (GST incl) over a six year period from 1 July 2013, reflects the full cost of chargeable services currently provided by Maritime NZ after factoring in planned efficiency gains during the transition period. The fees for MOSS-related services will also take into account administrative and operational factors particular to this new regulatory framework.
34. Based on information that SSM companies charge maritime transport operators approximately \$2.3 million per annum, total current SSM costs for operators are in the range of \$1,200 - \$1,300 per vessel per year (including audit and survey costs). Over a 10 year business 'lifetime' of an operation with 10 vessels, this works out to \$150,000 in SSM company and surveyor costs and nearly \$40,000 in Maritime NZ compliance costs (excluding costs associated with certification of vessel crew qualifications). Under the MOSS proposal the same operation would pay surveyor costs of around \$97,000 and Maritime NZ costs of \$22,500. The total cost differential (assuming the operator is subject to average audit frequency and no additional compliance inspections due to cause), is a 37% reduction.
35. Further, an operating certificate under the proposal would be issued for 10 years – which is a 'one off' initial cost and the renewal (assuming a good operating record) for a second 10 year period would be likely to attract a lower fee. In contrast, the maximum duration of an SSM certificate under the present system is four or five years (depending on vessel type) and, as noted above, an certificate is required for

¹⁰ *FishSAFE Review: Best Practice & Evaluation*, June 2012, by Rowena Cave, Factuality Research and Analysis, for Maritime New Zealand and FishSAFE.

¹¹ This will be part of a wider reform of information systems, signalled in Maritime New Zealand's *Statement of Intent 2012-15*, to develop and maintain effective and efficient organisational capability.

each vessel rather than for the maritime operation as a whole.

36. Audit costs over the lifetime of an operation would depend on operator performance. There could be as many as one audit per annum, or an initial audit followed by audits at a three yearly interval. Audit frequency, scope and intensity, and the basis on which frequency is determined, are implementation decisions.
37. The certificate of survey costs and the cost of vessel survey would be determined by the surveyor – operating on a commercial basis but with costs influenced by a competitive surveyor environment.
38. For an individual operator, compliance costs year by year, or over the lifetime of an operation, will depend on the size of operation (vessel numbers), complexity of operation, compliance and safe operating performance, and the market rate for survey services. In making implementation decisions that affect fees, Maritime NZ will be conscious of compliance costs but will be guided at first instance by how the detail of the proposed framework aligns with a safer operations outcome.
39. Benefits not fully taken into account in the cost-benefit analysis include:
- For **operators**, having a tailored system, more consistent, comprehensive and better-informed guidance, clearer lines of responsibility, reduced conflicts of interest and a more competitive market for survey services should lead to a better return on safety and compliance expenditure. More consistent standards will reward conscientious operators. An improved safety reputation may assist marketing, market access, recruitment, and public attitudes. The benefits of being able to sell and buy vessels without re-surveying and re-certifying them are also excluded from the analysis.
 - **Wider society** will benefit from a reduction in accident, search and rescue, and environmental clean-up costs and increased confidence in maritime safety in New Zealand.¹²
40. Costs not taken into account in the analysis include:
- Some **operators** will have to maintain a higher safety standard once current deficiencies are rectified. This may have financial benefits such as catching problems early, or more-efficient operators may replace some who are below standard.
41. Other factors not directly taken into account in the cost-benefit analysis include:
- **The impact on SSM companies.** There are currently seven SSM companies, employing 61 surveyors. Under the proposal, SSM companies will no longer have approved organisation status, and will lose some specific functions (for example auditing of maritime operators). They will however be able to continue as commercial businesses by employing surveyors and providing consultancy services to maritime transport operators. There will be a shift in the operating model for ex-SSM companies but there is no reason for their businesses to cease operating.

¹² Ibid at 3.3.

- **The impact on currently recognised surveyors working for SSM companies.**
There are currently 61 recognised surveyors working for SSM companies. The proposal will have no material impact on their ability to continue in this line of work (assuming they meet recognition requirements and survey standards), and they may do so on a self-employed basis or as an employee of a surveying company. They will be held to higher standards of survey and those who currently audit safety manuals will lose this income source. Recognised surveyors will receive more support and guidance from Maritime NZ, which it is envisaged will reduce their risk of 'failure' as surveyors and as a business.

Comparison of options applying proposal objectives

42. Recognising that such a comparison does not reflect the nuances of the options as conveyed in the text of this statement, the following high level comparative analysis indicates that the proposal aligns well with the objectives but that the other two options have a much weaker alignment.

Proposal objectives	Option 1: Status Quo	Option 2: Change SSM model	Option 3: new Maritime Operator Safety System
Improved safety	<p>Could be met over time through targeted Maritime NZ compliance interventions but does not address the 'cause' of the issue and would be a costly and resource intensive response to system failure.</p> <p>Could be met on an ad hoc basis</p>	<p>Could be achieved overtime through a range of interventions including Rule amendments, and Maritime NZ compliance targeting. System failure could be remedied to an extent but at considerable cost and the creation of confusion for operators and duplication of effort.</p> <p>Could be met</p>	<p>This is at the heart of the MoSS model and can be achieved through higher entry control (for operators), and higher survey standards - thus starting from a base of safer vessels and operating plans that have been assessed and accepted by Maritime NZ as capable of managing risks.</p> <p>Likely to be met</p>
Clearer lines of responsibility	<p>Retains current lines of responsibility and accountability, which are not clear or clearly understood</p> <p>Not met</p>	<p>As per Option 1.</p> <p>Not met</p>	<p>Makes lines of responsibility and accountability explicit and clear for maritime transport operators and surveyors</p> <p>Will be met</p>
Effective and efficient regulation	<p>The current system is associated with unsatisfactory safety outcomes which of itself is inefficient and evidence of an ineffective regulatory</p>	<p>Two of the key interventions needed to improve the current system involve Maritime NZ having more direct engagement with</p>	<p>The MoSS proposal avoids duplication of effort – through having only one regulatory party, and the level of regulatory intervention (e.g.</p>

	<p>model</p> <p>Not met</p>	<p>operators (thus duplicating the role of SSM companies), and more oversight of SSM companies (thus spreading Maritime NZ's compliance intervention resources across both operators and those responsible for the SSM system.</p> <p>Not met</p>	<p>audit frequency) will be based on risk and evidence.</p> <p>Likely to be met</p>
<p>Ease of compliance</p>	<p>Ease of compliance relates to the various parties in a safety system knowing their legal obligations and responsibilities (and thus being well placed to meet them). The safety outcomes of the current system suggest these responsibilities are not well enough known.</p> <p>Not met</p>	<p>Maritime NZ intervention – through engaging closely with SSM companies, surveyors, and operators could improve parties' knowledge of responsibilities but this would take considerable effort.</p> <p>Could be met</p>	<p>More direct Maritime NZ engagement with the operator and with surveyors is a built in part of the MoSS system</p> <p>Likely to be met</p>

Consultation

43. Consultation on the proposed rule changes, undertaken in accordance with section 446 of the Maritime Transport Act 1994, suggests an industry preference for systemic change rather than a patchwork of smaller solutions, and for independent surveyors supported by Maritime NZ through guidance and advice.
44. There have been two rounds of formal consultation. In each case, draft rules and invitations to comment (consultation documents) were published on Maritime NZ's website. 18 public meetings were held around the country. Submitters included SSM companies, operators and surveyors.
45. The first consultation round, in 2010, attracted 114 submissions (102 written and 12 oral). About two-thirds either supported the proposal (18 submissions) or

supported it with amendments (50), and about one-third (31) were opposed.

46. Changes to the survey function drew the largest response. In response, prescriptive detail about surveyor competency and currency was replaced with higher level, flexible requirements. Another key theme was doubt over Maritime NZ's ability to assume its functions under the maritime operator safety system. The implementation section below indicates how this risk is being addressed.
47. Further consultation in 2012 attracted 78 submissions (the majority written and 12 oral). Again, about two-thirds supported the changes or supported them with amendments and just under a third were opposed. Few commented on the content of the draft rules but many raised concerns about the cost to operators, the ability of Maritime NZ to implement the system, and a need for more implementation detail.
48. Focussing on the 2012 consultation, which was on rules most closely aligned with those proposed, support for the proposal and concerns in respect to it were derived from a range of stakeholders. The majority of submissions were from individuals involved in a range of operation sizes. Larger scale operators (those with a large number of vessels) who made submissions (e.g. East-by-West Ferries, Sanford Limited, Fullers Group, the Department of Conservation) generally supported the proposal. SSM companies collectively opposed it. There was only one submission from an industry organisation – the Seafood Industry Council, and the response was neutral.
49. In terms of the main concerns raised (beyond addressing these as considered appropriate in revision of the Rules), Maritime NZ has responded to these as appropriate. In respect to Maritime NZ's ability to implement the system, through a combination of business planning and detailed project management for MoSS, implementation outputs and resourcing requirements have been identified. Maritime NZ is therefore well aware of what is needed, and at what point in the implementation roll-out, and is working to ensure all necessary resources, regulations, guidance, standards, and other implementation requirements are in place in time.
50. The absence of implementation detail is also a concern Maritime NZ is actively working to address. At the date at which the draft rules were consulted on, implementation detail had not been formulated. The detail is being developed and as appropriate Maritime NZ is engaging with a specifically convened 'surveyors working group' and an industry advisory group. Detail will also be made known in the course of consultation on fees and charges regulations and survey requirements.
51. The purpose of the proposal is to improve safety outcomes for commercial maritime transport operators, not to reduce compliance costs. The concerns raised about compliance costs will, however, be taken into account in implementation decisions and design. Opportunity will be made for good operators to reduce costs (for example, linking audit frequency to compliance performance). Further, where fees must be applied for recovery of Maritime NZ activity costs (e.g. recognitions, processing of applications for MoSS related maritime documents), cost discipline will be exercised and anticipated efficiencies will be reflected in fees charged.

Conclusions and recommendations

52. The current regulatory framework (SSM) has not delivered sustained safety improvements, and injury and fatality rates remain unacceptably high. The underlying reason appears to be that the framework is not suited to achieving the objective set out earlier in this document. The recommended option is a new regulatory framework – the maritime operator safety system – that restores the direct relationship between Maritime NZ and the sector, enables better enforcement of safety standards, and enables and motivates operators to adopt and implement appropriate safety systems. The new system incorporates a number of efficiency improvements.
53. The new framework would use nation-wide and international evidence to inform surveyors and operators, target compliance effort at the areas of highest risk, and hold surveyors and operators to consistent and transparent national standards. It would promote accountability on the part of the regulator, surveyors and maritime transport operators through clearly establishing the responsibilities of each in the new rules.

Implementation

54. In terms of amendments to existing rules and the creation of new rules, the new system requires replacement of section 2 of Maritime Rule Part 21 with a new Part 19 (Maritime Transport Operation Certification), and replacement of sections 2, 3 and 5 of Maritime Rule Part 46 with a new Part 44 (Surveyor Responsibilities and Survey, Certification, and Maintenance for Ships). Consequential amendments will also be required to the 40 series of rules – these covering ship design, construction and equipment – to ensure alignment between the new Part 44 and ongoing requirements set out in the 40 series. Less substantively, consequential amendments will be required to Maritime Rules Part 51 and Part 53.
55. Implementation of the rules requires Maritime NZ to develop new operational policies, procedures and information systems and to update guidance for surveyors, operators, and Maritime NZ staff. A number of specific tasks are required to mitigate specific implementation risks, as indicated in the following table.

Implementation risk	Mitigation
<p>Maritime NZ not sufficiently resourced or ready to undertake its expanded role</p>	<p>Organisational redesign (“Maritime NZ Future State”) to better implement the new framework and other initiatives</p> <p>Dedicated project team planning implementation, and using an information technology provider with relevant experience</p> <p>Better job-design, job-sizing and costing through the funding review and other initiatives</p> <p>Strengthening skills in maritime safety and in health and safety in employment through recruitment and training</p> <p>Phasing-in operators by deeming safe ship management certificates to be maritime transport operator certificates until their expiry, and providing for an extension to these deemed certificates if necessary</p> <p>Retaining the option of contracting in audit services</p>
<p>Insufficient surveyors at the commencement of MOSS or surveyors undertaking MOSS surveys to a lower standard than required.</p>	<p>The deeming provision in Part 44 ensures that anyone with a ‘live’ SSM surveyor recognition on the commencement date will be a deemed MOSS surveyor. All SSM survey certificates were due to expire on 1 July 2013, and Maritime NZ extended these recognitions to 1 January 2015. The importance of having an appropriate number of surveyors was a key factor in that decision, and irrespective of their ‘deemed’ status for the first 6 months of MoSS they will be required to perform survey to MoSS standards.</p> <p>In respect the standards of survey under MOSS, Maritime NZ intends to provide detailed information and guidance to SSM surveyors on the new MOSS standards. The first tranche is scheduled to take place over October – December 2013.</p> <p>Maritime NZ will also be monitoring surveyor performance over the period of the new SSM certificates and will be using that information, together with assessment of a surveyor’s knowledge of new MOSS standards, as part of the surveyor recognition process.</p>

Implementation risk	Mitigation
Operators and crew lack the knowledge they need to comply with the new rules – particularly given a less-prescriptive approach and greater operator responsibility	<p>Industry will have almost a year from the rule change until MOSS comes into effect.</p> <p>Two-way communication with affected parties has been ongoing and will continue, and an extensive multimedia programme of guidance and seminars for operators will be delivered (planning underway)</p> <p>Working with industry and providers to develop a new qualifications and operational limits framework for mariners (a separate initiative with systems procurement underway)</p> <p>Developing online training in health and safety in employment, adapted for the domestic maritime industry (near completion)</p>

56. The new system will complement but cannot substitute for existing regulation. For example, the compliance framework dovetails with operators' Health and Safety in Employment (HSE) Act 1992 obligations.
57. Restoring direct regulatory functions to Maritime NZ will allow better and more-targeted interventions, scaled to the risks associated with each operation and operator. Enforcement through legal action will be swift in cases presenting immediate safety concerns, but will be a last resort in a system that will encourage compliance through other mechanisms such as education and industry liaison.
58. Operators will be supported to develop and maintain their safety system. They will be encouraged to take preventive measures and given timeframes to comply with minor deficits, having been educated as to why action is necessary. Intervention will rise in severity for operators who fail to respond to these initial actions.

Monitoring, evaluation and review

59. Compared to the SSM system, the maritime operator safety system will greatly improve Maritime NZ's ability to monitor the performance of both commercial maritime transport operators and ship surveyors. Most of the information from audits and surveys is currently held by safe ship management companies and therefore not available to Maritime NZ as a matter of course.
60. An evaluation and monitoring framework for the new system will combine input from the industry and other key stakeholders with data collected directly by Maritime NZ through its enhanced regulatory role. The evaluation will be divided into three phases – formative, summative and impact.
61. Maritime NZ intends to use improved information flows to refine its regulatory approach in order to respond to emerging safety issues. Over time, information will be used to make efficiency gains. The 'formative' phase will be used to identify any systemic issues that emerge from the introduction of MOSS and allow Maritime NZ to address them early. It is expected to last for 3 years from the implementation date.

62. The 'summative' phase will use success measures and indicators to assess whether the MOSS programme has achieved the intended objectives and whether there are any unintended outcomes (both positive and negative). It is expected to be used to validate the Covec cost benefit analysis.¹³ The summative phase will occur 5 to 6 years after implementation.
63. The 'impact' phase will consider the financial and non-financial effect of the new system. It is expected to take in the vicinity of 10 to 13 years to establish these impacts.

¹³ Irvine *et al* (2012).

Appendix 1: Reviews of Safe Ship Management

Reviewer and concerns raised	Main actions taken in response
Pacific Marine Management Limited (2000, commissioned by Maritime Safety Authority): lack of consistency and overcharging by safe ship management companies; reluctance by some owners and operators to undergo audit.	(2000-2002): Maritime Safety Authority commissioned the review of safe ship management by Thompson Clarke Shipping.
Thompson Clarke Shipping Pty Limited ¹⁴ (2002, commissioned by the Maritime Safety Authority): safe ship management companies exhibited a lack of support for Maritime Safety Authority safety initiatives, inconsistent standards, and a continued focus on physical survey of vessels as opposed to systems.	(2005): Maritime Rule amended to require safe ship management companies to follow a code of practice; Maritime Safety Authority took direct responsibility for initial vessel audits and began checking vessel certification six months after every survey. Later found that Authority unable to compel safe ship management companies to follow the code.
Maritime NZ ¹⁵ (2006): excessive charges and poor services from safe ship management companies; varying standards of surveyors; maritime rules not understood by safe ship management companies and Maritime NZ. Operators complained that safe ship management too complex and big-ship oriented.	(2007): Advisory Circular – Part 46 – provided guidance on survey and certification, including appropriate qualifications and experience for surveyors.
Maritime NZ ¹⁶ (2007): the safe ship management system did not allow the Director to require surveyors to meet competency standards on an ongoing basis; did not allow changes to the service delivery model; was difficult to understand for many.	<p>(2008): a policy workstream led to the maritime operator safety system proposal. An operational workstream led to: formal delegations to safe ship management companies to ensure they have legal authority and to increase Maritime NZ oversight; Maritime NZ took direct responsibility for issuing safe ship management certificates, developed a checklist for certification, and employed a person to help vessel owners develop their own safe ship management plan and gain a better understanding of their requirements.</p> <p>A further package of measures to help surveyors improve survey quality and vessel safety was developed in 2011. Work is under way on developing better support for surveyors.</p>

¹⁴ *Review of Safe Ship Management Systems* (2002). Thompson Clarke Shipping Pty Limited

¹⁵ *Performance Report – Monitoring and Compliance: Safe Ship Management Strategic Directions Discussion Document*.

¹⁶ *Draft Project Plan, SSM Development Programme*, December 2007.