

## Regulatory Impact Statement

### Amendments to Maritime Rule Part 40D – design, construction and equipment – fishing ships

This Regulatory Impact Statement has been prepared by the Ministry of Transport with assistance from Maritime NZ.

The objective of the proposed amendments is to rationalise design requirements on fishing ships, which in some cases are inappropriate for the predominantly small vessels operating in the New Zealand fleet. The review has also provided an opportunity to remove out-dated references and clarify design and construction requirements, resulting in improved safety outcomes with little additional cost to industry. The proposed regulatory amendments have been developed in conjunction with industry and address issues that cannot be efficiently resolved using non-regulatory options.

Supporting information for some of the risks, identified by the sector, for example rigorous information on the condition of many of the older ships, is not available to Maritime NZ. Key data comes from the Accident Compensation Corporation and from an independent survey of a sample of small ships. Most ship surveys are undertaken by safe ship management companies and their findings are not currently available to Maritime NZ.

The proposal will not impair property rights, market competition, incentives on business to innovate or invest, or override any of the fundamental common law principles. The proposal is consistent with the Government Statement on *Better Regulation, Less Regulation*.

**Christine McNeight**  
**Senior Advisor**  
**Ministry of Transport**

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## **BACKGROUND**

### *Sector Profile*

1. Commercial fisheries make an important contribution to New Zealand's gross domestic profit. In 2010, commercial fishing realised \$1.4 billion in export earnings and directly employed 5403 people in the industry.
2. Maritime NZ (MNZ) records in September 2011 showed the fishing fleet consisted of 1074 active ships certified in New Zealand.

### *The Regulatory environment*

3. Rule Part 40D of the Maritime Rules (the Rule) prescribes standards for design, construction and equipment on fishing ships. It is directed at naval architects, surveyors, "authorised persons"<sup>1</sup> and fishing vessel operators.
4. Part 40D is aligned with the Torremolinos International Convention for the Safety of Fishing Ships and associated Protocol, although New Zealand is not party to this convention.
5. Ensuring fishing vessels meet the standards prescribed in Part 40D is the responsibility of the ship owner and operator. Each operation has traditionally been subject to regular inspections by ship surveyors who are employed by Safe Ship Management (SSM) companies. As a further safety check approximately 20% of SSM fishing ships are visited by MNZ safety inspectors each year.

### *Problem Definition*

6. Fishing vessels operate in challenging conditions where the implications of accidents on crew may be grave if they are far from shore. With 7.39% of the workforce suffering injuries annually, the fishing industry reports almost twice as many fatal and non-fatal injuries per year as the next most dangerous industry (mining and quarrying).
7. Between 2002 and 2010 there were 28 fatalities in the fishing industry, compared with six in the non-passenger sector and four on board passenger vessels. The cost of fishing sector fatalities on New Zealand society<sup>2</sup> is estimated to be \$102.8 million dollars over this period.
8. Analysis of accident claims data has shown that it is failure of ships' structure and equipment that was the most common cause of injury, accounting for approximately 5 of the 21 serious harm incidents that occur on fishing vessels on average per year. Part 40D is therefore vital to sector safety.

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<sup>1</sup> Authorised Persons inspect and audit Safe Operating Plans for ships less than 6 metres in length.

<sup>2</sup> The social cost per life is based on the December 2011 update of the Ministry of Transport's publication "The Social Cost of Road Crashes and Injuries".

9. However, while new ships incorporate many new design and construction features that enhance safety, the average of age of the current fishing fleet is over 30 years old. Safety risks associated with this low turnover are:
- Non-compliant ad hoc modifications
  - Aging, out-of-date and unsafe equipment
10. Most of the fishing fleet (93%, approximately 848 ships) are small, less than 24 metres in length. Of these 248 are less than 6 metres in length. The majority of the fishing work force is employed on these ships. However, many of the rules in 40D are aligned to international standards that are more appropriate to larger ships than those operating in the NZ fishing fleet (see paragraph 4 above).
11. There is evidence of low compliance with Part 40D within the fishing industry. In 2005 MNZ undertook a confidential and independent investigation (“2005 Review”) of a sample of 58 fishing ships less than 24 metres in length and found that none were fully compliant with Part 40D.

## **IDENTIFYING AND MANAGING RISKS IN THE SECTOR**

12. MNZ’s response to the findings of the 2005 Review has been to:
- Convene a working group of industry experts to determine whether and what interventions were required to improve safety in the sector.
  - Convene a workshop of “authorised persons” which identified a wide range of issues related to small vessels under 6 metres.
13. The sector categorised problems with the current regulations as follows:
1. Some of the rules are unclear and interpretation is inconsistent across the sector.
  2. Although the fleet is dominated by small ships, parts of the Rule are inappropriate for ships under 24 metres
  3. Some of the requirements relating to equipment are out date and do not reflect current best practice.
  4. Lessons have been learned from recent safety incidents. These findings are not yet reflected in Part 40D.
14. A number of non-regulatory options have been developed and are currently being implemented (see Appendix 1). However, as 40D deals with construction and equipment rather than behaviour, regulatory specifications are also required.

## PROPOSED REGULATORY AMENDMENTS

15. The proposed regulatory amendments represent a small subset of those initially developed by the 40D Working Group. Many of those not presented have either been addressed through a non-regulatory approach (Appendix 1) or the benefits of changing the Rule were equivocal.
16. The sector considers regulations that are appropriate for the type of vessels and working conditions of the sector are essential for ensuring fishing vessel design, construction, and equipment is safe. Not all requirements in 40D can currently be described as “appropriate” and the sector has been supportive of Maritime NZ’s initiative to address this.
17. Many of the sector recommendations for regulatory change are informed by the 2005 Review. More in depth information was not readily available to MNZ due to information about deficiencies being held by SSM companies. This bottleneck is likely to be resolved with the introduction of a revised approach to SSM (Appendix 1).
18. Cost effectiveness has been a major consideration in determining how these rules are to be implemented. Modifying older ships to meet new structural requirements is not generally cost effective, so where this is an issue, older ships are either excluded from the amendment or an alternative standard is proposed that will ensure these ships are as safe as is practical.
19. There are some new financial costs to some operators in the proposed new requirements. However the proposed amendments are more likely to lead to a reduction in costs, overall, as they are designed to recognise that smaller ships have different safety requirements to those specified under the status quo.
20. Objectives for the proposed regulatory amendments include:
  - (i) Improved **SAFETY** of small ships
  - (ii) Amendments are **APPROPRIATE** for the scale of small ships and proportionate to risk levels
  - (iii) Improved **CLARITY** of the Rule so that interpretation is consistent across the sector and compliance is increased.
  - (iv) Ensure the Rule **REFLECTS CURRENT BEST PRACTICE**, modern standards and references other rules or legislation accurately

### ISSUE 1: Placement of bulkheads in fishing vessels less than 24m

21. It is critical for vessel stability that the placement of the collision bulkhead is appropriate. Many small vessels operating in NZ waters were constructed before the Rule was developed and therefore may not comply with it, despite being inherently “safe”.
22. Inspection of fishing ships less than 24m in length during the 2005 Review found 28% had bulkheads that did not meet the requirements in Part 40D. Extrapolating from this, it is likely that over 230 ships may be non-compliant

but not necessarily unsafe. Stringent enforcement would impose heavy costs without necessarily improving safety.

| <b>Regulatory Options</b>    |  |                         |
|------------------------------|--|-------------------------|
| <i>Retain the status quo</i> | Bulkhead placement in many instances would continue to be at odds with the Rule. Owners would face high costs by having to either make unnecessary and costly modifications or applying for an exemption.  |                         |
| <i>Preferred Option</i>      | Table 1 of Part 40D11(3) will be amended to reflect common vessel size categories and introduce minimum and maximum collision bulkhead placement criteria that relate to overall vessel length. The Table will only apply to vessels constructed after the Rule is gazetted. Bulkheads on existing vessels will be subject to risk appraisal by surveyors but requirements will not be prescriptive. |                         |
| <b>Impact</b>                |  |                         |
| <i>Objectives met</i>        | SAFETY, APPROPRIATENESS  |                         |
| <i>Benefits</i>              | Will reduce current compliance costs for operators of existing ships and introduces workable regulations for new ships   | <b>LOW but positive</b> |
| <i>Costs</i>                 | The cost impact of compliance will be lower relative to the cost of compliance with the current requirements. Operators with unsafe bulkheads will incur costs to improve them but this will be less costly than moving the position of the bulkhead.  | <b>NIL</b>              |

## **ISSUE 2: Bulwarks and guard rails are essential for crew safety but they can obscure forward vision on some small ships**

23. Analysis of ACC data shows that 11% of injuries in the fishing industry are caused by slips, trips and falls (including loss of people overboard), indicating that inadequate guardrails impose a significant cost to society and the industry's productivity.

24. The 2005 review found that 10% of small fishing ships did not comply with the Rule with regard to bulwarks and guardrails because they impeded forward vision.

| <b>Regulatory Options</b>    |   |            |
|------------------------------|---|------------|
| <i>Retain the status quo</i> | Continued non-compliance will compromise safety for crew operating on deck but in some instances compliance with the Rule will exacerbate navigation safety risks. Vessels found to be deficient will be detained until the deficiency is rectified, reducing productivity. |            |
| <i>Preferred Option</i>      | <i>Amend Rule 40D.22</i> to permit ships to install alternative means of protecting the safety of the crew on decks, such as storm rails and handholds, where guardrails and bulwarks impede forward vision and navigation safety.  |            |
| <b>Impact</b>                |   |            |
| <i>Objectives met</i>        | SAFETY, APPROPRIATENESS   |            |
| <i>Benefits</i>              | Will improve safety outcomes while allowing for ship navigation concerns.   | <b>LOW</b> |
| <i>Costs</i>                 | Negligible – the cost of alternative safety measures are likely to  | <b>NIL</b> |

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|  | be less than those currently required. |  |
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### ISSUE 3: Testing of lifting appliances

25. Lifting appliances are a recognised hazard in the fishing industry. Improper use, challenging working conditions and structural failure can lead to accidents and the nature of this equipment means injuries are often serious. At present, only lifting appliances on “new” ships (those constructed after 2004) are subject to survey, despite the fleet consisting of mostly older ships.
26. The skills necessary to test lifting appliances are specialist ones that not all surveyors have. Unlike other parts of the maritime sector, fishing ship surveyors are not required to be certified as “competent” to assess lifting appliances, potentially undermining the reliability of this safety check.

| Regulatory Options           |   |             |
|------------------------------|---|-------------|
| <i>Retain the status quo</i> | Unsafe equipment on fishing ships will continue to be operated without being subject to appropriate inspection standards.   |             |
| <i>Preferred Option</i>      | <i>Amend Rule 40D.67</i> to require that equipment on <u>all</u> fishing ships must be tested. Specify that testing must be by a “competent person” (that is someone with relevant qualifications).   |             |
| Impact                       |   |             |
| <i>Objectives met</i>        | SAFETY, CLARITY   |             |
| <i>Benefits</i>              | Although specific data is not readily available, accidents with lifting equipment are known to make up a large proportion of the injuries attributed to equipment failure. Introducing inspections for existing ships and testing by “competent persons” will reduce the number of accidents caused by lifting equipment.<br>Inspections of lifting appliances for existing ships will remove a potential barrier to entry for new ships.   | <b>HIGH</b> |
| <i>Costs</i>                 | Owners of older ships may be impacted. There is no data to determine how often lifting equipment is repaired or replaced on older ships and therefore the likely cost impact of the amendment on the industry cannot be quantified. However, new ships are currently recruited to the industry, suggesting the additional cost of inspecting lifting appliances is marginal.<br>The cost will be mitigated by owners being able to time equipment replacement and maintenance to coincide with their annual survey. | <b>HIGH</b> |

### ISSUE 4: Risk of refrigeration systems releasing harmful gases

27. Refrigeration systems contain harmful gases which, when released in an uncontrolled manner, can put the lives of crew at risk if they are trapped in confined places.
28. To manage this risk, Part 40D requires the same breathing apparatus on all ships with harmful refrigerants. However, on small ships the risks of crew being overcome by gas leaks are lower, the specified equipment in many

instances is too large to be worn in their refrigeration spaces and the cost of the equipment and its maintenance are significant for small operators.

| <b>Regulatory Options</b>       |  |             |
|---------------------------------|--|-------------|
| <i>Retaining the status quo</i> | As the Rule is unworkable and impractical for small ships there is likely to be ongoing resistance to complying with it. Non-compliant operators would face the cost of purchasing two sets of breathing apparatus (\$3,000 ea) and maintaining them (average annual cost of \$176) when it may be impractical for them to be used. The likely one off cost for a compliant industry is \$300,000, with approximately \$8,800 in maintenance costs to be met by the industry annually. |             |
| <i>Preferred Option,</i>        | <i>Amend Rule 40D.29 so that</i> ships less than 24m in length can instead provide emergency escape breathing devices (EEBD) and only if there is a risk of persons becoming trapped in refrigeration spaces.  |             |
| <b>Impact</b>                   |  |             |
| <i>Objectives met</i>           | SAFETY, APPROPRIATENESS  |             |
| <i>Benefits</i>                 | More appropriate requirements are expected to substantially improve safety outcomes. Potential compliance costs will be substantially reduced for small ships. Operators will have to purchase one apparatus costing \$1,500 with no ongoing maintenance costs. The amendment will save the industry \$225,000.  | <b>HIGH</b> |
| <i>Costs</i>                    | Lower than the status quo, but still some costs.   | <b>LOW</b>  |

### **ISSUE 5: Small ships must be watertight because of the risk of swamping and sinking in high seas**

29. Small ships are vulnerable to flooding in large seas. Flooding and capsizing accounted for 5.5% of fishing-related injuries in 2009/10. Capsizing can lead to the loss of lives through drowning and the loss of a ship and business. If water floods into a fishing vessel through doorways, hatches or ventilators, buoyancy may quickly be compromised but construction and design features such as sills below weather tight doors, coamings around hatches and appropriate ventilator placement can provide some protection against flooding. Presently, standards in Part 40D do not represent international best practice in this regard.

| <b>Regulatory Options</b>    |  |
|------------------------------|--|
| <i>Retain the status quo</i> | Unsafe ships will continue to be constructed with heightened risk of drowning and economic losses.   |
| <i>Preferred option</i>      | Amend Rules 40D.13 (weathertight doors) and 40D.14 (hatches). To reduce compliance costs, these rules will apply only to ships built after the amendments come into force in 2012. <ul style="list-style-type: none"> <li>• For ships under 12 metres in length, minimum sill and coaming heights are increased.</li> <li>• For ships greater than 12 metres, sills and coaming heights are</li> </ul> |

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|                       | <p>specified at 300 millimetres.</p> <ul style="list-style-type: none"> <li>For ships under 24 metres in length, ventilator coaming heights are specified will be specified rather than being required to be “as high as practical”.</li> </ul> <p>Amend Rule 40D.17 to prohibit fishing vessels from installing ventilators that penetrate the hull.</p>  |            |
| <b>Impact</b>         |  |            |
| <i>Objectives met</i> | SAFETY, APPROPRIATENESS  |            |
| <i>Benefits</i>       | <p>Appropriate design requirements are expected to improve safety margins for new ships, raising standards across the sector over time. By factoring in these design requirements prior to construction, the proposed changes will have a negligible effect on build costs.</p> <p>Ventilator placement requirements are intended to head off future design practices and are not expected to impact the industry at this stage.</p> | <b>LOW</b> |
| <i>Costs</i>          | No cost impact on existing fleet.  | <b>NIL</b> |

#### ISSUE 6: Fires prevention and management

30. Between 2001 and 2006 engine rooms were the source of seven out of ten reported fires on fishing ships less than 24m. Three of these seven fires resulted in the vessel sinking, creating an increased risk to crew safety and destroying fishing ships worth over \$1.5 million. Fire was identified as the cause of 5.5% of commercial fishing injuries in 2009/10.

31. Design, construction and equipment standards work to reduce fire risk onboard. The impact of fire is significantly mitigated if fuel and air are prevented from entering the fire. The scale of small ships makes them particularly vulnerable to engine room fire as:

- a fire may be unnoticed until it is out of control because the machinery space is unoccupied and hidden below decks
- pipework containing fuel is commonly found in engine rooms and this may rupture during a fire. There is evidence that engine room pipes are often made of inappropriate material that can melt during fires and potentially create a leak in the hull
- a functioning engine is the vessel’s primary means of returning to safety

| <b>Regulatory Options</b>    |   |
|------------------------------|---|
| <i>Retain the status quo</i> | The status quo does not specify design, equipment and construction features on small ships that maximise protection from fire, so the current risk of fires on small vessels would be maintained.   |
| <i>Preferred option</i>      | <p>Amend rules, including:</p> <ul style="list-style-type: none"> <li>40D.17: will require all ships to have a means of closing off air to engine room vents.</li> <li>40D.21: will clearly specify requirements for inlets and piping</li> <li>40D.27: will require fuel system shut off valves to be attached to</li> </ul> |



|                       |   |            |
|-----------------------|---|------------|
|                       | the fuel tank   |            |
| <b>Impact</b>         |   |            |
| <i>Objectives met</i> | SAFETY, CLARITY,  |            |
| <i>Benefits</i>       | <ul style="list-style-type: none"> <li>All amendments reduce the risk of fires on small vessels escalating, thereby reducing the number of fire related injuries. For those ships with non-compliant piping the benefit of risk reduction is considerably higher.</li> </ul>                | <b>MED</b> |
| <i>Costs</i>          | <ul style="list-style-type: none"> <li>40D.17; 40D27 - the cost of new equipment is low.</li> <li>40D21: There is limited information available regarding the number of ships impacted by new requirements for fire proof piping, but it is likely they will be small old ships.</li> </ul> | <b>LOW</b> |

### ISSUE 7: Faulty and incorrectly documented electrical systems

32. Electrical faults at sea can have serious implications for the operation of safety-critical equipment, such as engine power, lighting and communication equipment. The 2005 review found that electrical systems for approximately 12% of vessels were substandard. Anecdotal evidence suggests that substandard electrical systems are more common on older small vessels.

33. Problems identified are:

- Many operators believe that electrical systems design approval is only required for new vessels. This practice risks fires, stray currents and accelerated corrosion in the hull of ships.
- The Rule references outdated standards and fails to put sufficient emphasis on professional system design and installation.
- The seriousness of electrical failure at sea can be exacerbated if wires are not clearly marked and documentation is not available on board in case of emergencies. A crippled vessel is stranded if those on board are unable to fix electrical failures or contact shore-based support.
- Small ships can not carry large amounts of documentation because of limited wheelhouse space. As a consequence, current requirements are impractical and rarely complied with.
- The 2005 review noted that vessel operators were incorrectly connecting batteries, undermining the usefulness of a back-up power supply in emergencies.

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| <b>Regulatory Options</b>       |   |
| <i>Retaining the status quo</i> | <ul style="list-style-type: none"> <li>The electrical systems and documentation on many boats will be non-compliant continuing the current level of risk of fires, stray currents and accelerated corrosion in the hull of ships.</li> <li>The Rule will reference outdated standards.</li> </ul> |
| <i>Preferred option</i>         | Amend rules;<br>40D.30A will clarify that electrical system design must be approved before it is installed on old as well as new fishing ships and after  |

|                       |   |             |
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|                       | <p>major modification.</p> <p>40D.30B will:</p> <ul style="list-style-type: none"> <li>• Clarify standards for workmanship and materials in electrical systems</li> <li>• Will clarify that the responsibility for clearly marked electrical systems consistent with the vessel's wiring documentation is the responsibility of the vessel owner not the builder.</li> </ul> <p>Rule 40D.30C will update standards for electrical system for ships less than 24m in length to reflect the current AS/NZ standard developed in 2008.</p> <p>Amendments to 40D.30E will:</p> <ul style="list-style-type: none"> <li>• Require documentation to be available and accessible onboard ships that are greater than 12m in length and constructed after the amendment comes into force.</li> <li>• Outline the contents of the electrical system documentation.</li> <li>• Will remove onboard documentation requirements for ships under 12 m as they normally have electrical systems that are comparatively uncomplicated and limited wheelhouse space.</li> </ul> <p>40D.31 will clarify the purpose of an alternative battery and emphasise that it should be connected via a switch to facilitate rapid changeover.</p> <p>40D.32C will clarify that electrical systems must be tested by a surveyor when the system is first installed or following a major alteration, modification or repair.</p> |             |
| <b>Impact</b>         |   |             |
| <i>Objectives met</i> | SAFETY, APPROPRIATENESS, CLARITY, REFLECTS CURRENT BEST PRACTICE  |             |
| <i>Benefits</i>       | Amending 40D.30A, 40D.30B, 40D.30C, 40D.31 and 40D.32C will reduce risks to crew and the structural integrity of ships from dangerous electrical systems.<br>Amending 40D.30E will remove compliance costs for ships under 12m.   | <b>HIGH</b> |
| <i>Costs</i>          | No new assets will need to be purchased to comply with these amendments but a higher level of inspection may impose costs on owners of older ships.   | <b>LOW</b>  |

### ISSUE 8: Issues specific to small ships less than 6 metres in length

34. There are approximately 250 commercial fishing boats less than 6m in length with a highly diverse range of designs suited to different types of fishing, including set netting, potting and paua diving. These small vessels are particularly vulnerable to challenging weather conditions and there is anecdotal evidence that accidents in this sector are significantly under-reported.

35. Generally, boats less than 6m in length are surveyed by “authorised persons”. A workshop of authorised persons noted several problems. Listed here are only those problems that are best addressed by regulatory change. They include:

- A compass is essential for small ships caught in poor visibility (common occurrence at sea). They risk becoming disorientated. Many operators are unaware of the requirement in Maritime Rule 45.23.
- Part 40D requires that “Fuel tanks be supplied by the manufacturer”. This is out of date and does not reflect industry practice.
- Surveyors are required to inspect fuel systems but all other aspects of ships less than 6m in length are assessed by authorised persons (AP). The sector finds this arrangement unnecessarily complicated.
- Sparks can occur at battery terminals when they are connected. There is little information available to determine what proportion of fishing ships less than 6m without this equipment but there is international evidence to suggest this is a common cause of fires on small craft. Non-isolated batteries can also be subject to current drawdown which can undermine the strength of the battery to start the engine.
- All petrol tank spaces must be fitted with hydrocarbon detection devices but these are not failsafe and, in some instances, may be unnecessary.

36. Many fishing industry participants on small ships are sole operators without the resources of larger operators. For this reason, the proposed amendments have been drafted so that they recognise the diversity of vessel types in this part of the industry, their small capacity and are mindful of operators’ limited resources.

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| <i>Retaining the status quo</i> | Risks to safety in this sector of the fishing industry will be perpetuated if operators are not equipped with a compass or battery isolator. Operators will also be required to comply with fuel system standards (their survey, tanks and hydrocarbon detectors) that are inappropriate, creating unnecessary cost.   |
| <i>Preferred Option</i>         | <p>Appendix 5, 5.9A will be amended to explicitly require a compass on all small fishing vessels.</p> <p>Appendix 5, Clause 5.6 will be amended such that fuel tanks would need to comply with AS/NZS 2906.2001 Fuel containers - Portable-plastic and metal.</p> <p>Appendix 5, Clause 5.6 will be amended so that the construction and installation of fixed-in place fuel tanks, pipes, hoses and fittings would be subject to regular and specific appraisal by “Approved Persons”.</p> <p>Appendix 5, Clause 5.7(4) will require the installation of battery isolation switches on ships less than 6m in length.</p> <p>Appendix 5, Clause 5.6 will be amended so that detectors will only be required if the accumulation of hydrocarbon vapours is possible and a</p> |

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|-----------------------|---|------------|
|                       | source of ignition is present.  |            |
| <b>Impact</b>         |   |            |
| <i>Objectives met</i> | SAFETY, APPROPRIATENESS, CLARITY, REFLECTS CURRENT BEST PRACTICE  |            |
| <i>Benefits</i>       | <p>The compass requirements (which already exist) will be highlighted, leading to greater compliance and improved safety in the sector.</p> <p>Changes to fuel system requirements will improve safety and be more practical to comply with, leading to cost savings of approximately \$400/vessel in situations where a hydrocarbon detector is no longer required.</p> <p>Assessment of fuel systems by Approved Persons will reduce the cost of inspections.</p> <p>Battery isolation switches will improve safety on small boats by reducing the likelihood of fumes from fuel systems exploding or batteries failing unexpectedly.</p> | <b>LOW</b> |
| <i>Costs</i>          | Battery isolation switches cost \$35 to \$65 (+installation) but are already found on most commercially constructed boats.  | <b>LOW</b> |

### **ISSUE 9: Unclear and inefficient regulatory requirements**

37. Consultation with industry has revealed a number of rules in Part 40D that are open to misinterpretation, creating high levels of non-compliance. In extreme cases, this apparent lack of clarity has led to recommendations by the Transport Accident Investigation Commission. Additionally, Part 40D has not kept pace with standards in other jurisdictions, leading to unnecessary costs for the industry.
38. Many of these issues have been discussed and resolved during surveyor workshops or clarified through educational publications and the Advisory Circular. Despite this non-regulatory approach, problems persist.
39. The 2005 Review, accident reports and feedback from the 40D working group indicate that ships may be being modified after they are surveyed, creating significant risks to the safety of fishing ships and those on board.
40. Fishing ships that meet the requirements of the Australian National Standard for Commercial Vessels (NSCV) are routinely imported from Australia but each one must have its design approved by surveyors before it can be deployed in New Zealand waters. This regulation adds little value and costs the industry unnecessarily.
41. Transport Accident Investigation Commission (TAIC) recommendation 011/08, following the *Kotuku* sinking incident, highlighted that the requirements for bilge systems in 40D are not as clear as they should be, leading to misinterpretation by operators.
42. Many ships are likely to have anchors and cables that were in place before the introduction of anchor and cable requirements in 40D. At present, the regulations are silent on what standard newly installed anchors and cables

would have to meet for these existing ships. In the absence of specific requirements, equipment meeting modern standards may not be adopted, jeopardising the welfare of crew and the ships.

| <b>Regulatory Options</b>    |  |
|------------------------------|--|
| <i>Retain the status quo</i> | <p>New Zealand's ageing fleet of fishing ships require constant maintenance but substantive repairs may be undertaken without suitable oversight by a surveyor. It is expected that changes to Safe Ship Management may improve enforcement of the requirements.</p> <p>Failing to amend regulations to recognise NSCV will continue to cost industry unnecessarily.</p> <p>Without amendments, resources will continue to be spent clarifying the intent of the rules through education, which has proven to be relatively ineffective thus far.</p>  |
| <i>Preferred option</i>      | <p>Amending Rule 40D.8 will emphasise that owners and the master of a ship must ensure that post-survey modifications to the structure, equipment, arrangements, material or scantlings must be further approved by a surveyor.</p> <p>Amending 40D.9 will recognise the NSCV so that ships that are certified as complying with this standard may operate in New Zealand waters without additional survey approval.</p> <p>Amending Rule 40D.28 will give effect to the TAIC recommendation, reinforcing that all ships with inboard propulsion machinery and through hull fittings must have bilge level devices that are linked to audible alarms located near the steering position.</p> <p>Amending Rule 40D.75(3) will ensure that newly installed anchors and cables on existing ships will have to comply with best practice requirements in Part 40D.</p> |
| <b>Impact</b>                |  |
| <i>Objectives met</i>        | SAFETY, CLARITY, APPROPRIATENESS, REFLECTS CURRENT BEST PRACTICE   |
| <i>Benefits</i>              | <p>The level of benefit from clarifying these rules is difficult to quantify but it is expected that safety onboard ships will improve through independent assessment of modifications and consistent application of bilge alarm and anchoring requirements. Anchor and cable standards will gradually improve as old equipment is replaced, removing a potential disincentive to invest in modern ships.</p> <p>Recognising NSCV is estimated to save the industry \$50000 per annum, remove barriers to importing relatively modern vessels from Australia and ensure Part 40D is in step with other jurisdictions.</p>  |
| <i>Costs</i>                 | <p>Likely to be low. There is no information to determine how frequently older vessels change anchoring equipment, what proportion elect to adopt standards that do not comply with</p>  |

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|  | <p>40D, and whether sub-standard anchors and cables are appreciably less expensive than equipment that complies with the Rule.</p> <p>Removing design approval requirements will reduce revenue for surveyors.</p> |  |
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## CONSULTATION

43. The proposed new draft rule part was released for consultation on 28th October 2010. The closing date for submissions was 17th December 2010. This draft was developed with the input of the 40D Working Group, consisting of naval architects, surveyors, operators and policy advisors. Further input was received from the SOP Authorised Persons workshop, who specialise in the survey of boats less than 6m in length.
44. A further 828 people, some of whom had previously indicated that they wished to be informed of any amendments to Part 40D, were sent consultation emails at this time. The email contained an Invitation to Comment and a copy of the proposed amendments. The recipients were asked for comments on specific proposals and also invited to make any general comments on the proposed changes to the Rule. 275 people opened the email.
45. On the 9th of December 2010 the same addressees were emailed reminders informing them that they had two weeks remaining to make submissions. A total of four responses were received by email. Additionally two external and one internal response were emailed directly to the rules co-ordinator within the consultation period.
46. The submissions, and MNZ's response to them, are contained in the Summary of Submissions, available from MNZ.

## IMPLEMENTATION, MONITORING, EVALUATION AND REVIEW

47. Maritime New Zealand will be undertaking workshops with surveyors and Maritime Safety Inspectors to highlight changes to the Rule and ensure they are interpreted consistently. The advisory circular will also be refreshed to reflect changes to the Rule and address areas where additional guidance has been requested but where this has not met the threshold for introducing changes to the rule.
48. A consolidated version of Part 40D and the Advisory Circular will be available on MNZ's website. Industry education aimed at owners, masters and surveyors will be undertaken via the publication of information in the internally produced magazine "Safe Seas Clean Seas", with further education coordinated through the industry body "FishSafe".
49. At present, compliance with Part 40D is assessed by surveyors who advise vessel owners, via SSM companies, when a vessel is deficient and approve it when the deficiency is remedied. Some changes to this process are forecast with the introduction of MOSS in 2013, improving access to information about deficiencies and the impact of the proposed Rule amendments.

50. However, it is likely that in the short term, most qualitative information regarding the performance of Part 40D will come via regular workshops with surveyors and industry, scrutiny of applications for exemptions, and reports from MNZ safety inspectors and investigators.

## APPENDIX 1

### NON-REGULATORY MEASURES AFFECTING SAFETY IN THE SECTOR

51. The Maritime Operator Safety System (MOSS) has been proposed and is being developed with the purpose of reviewing and refreshing the inspection and audit process for shipping vessels currently overseen through Safe Ship Management. High levels of non-compliance with Part 40D are indicative of failures in SSM.
52. Crew competence and best practice is critical to safety in this inherently high risk industry. The following measures have been undertaken to ensure this is as high as possible.
- Maritime schools provide training in skills that promote safe practice amongst fishing crews.
  - MNZ has co-ordinated the development of an industry led body, FishSAFE that is focused on improving fishing industry practices through education. Priorities to date have been the development of the Safety Guidelines for Small Commercial Fishing Ships and the development of associated injury prevention training. The target audience are the owners, operators and crew of fishing vessels under 24 metres in length.
53. Other measures undertaken by the sector include:
- A Fishing Sector Action Plan with the purpose of reducing the toll of work related injuries in the industry has been developed by MNZ, FishSAFE, Department of Labour, Accident Compensation Corporation and stakeholders. Improving the fitness of fishing vessels is considered in this plan.
  - As a consequence of the findings after the sinking of the *Kotoku* in 2006, a Guide to Fishing Vessel Stability was published in 2011 and relevant Safety Bulletins and Marine Guidance Notices are available on MNZ website.
  - In recognition of the frequency and severity of ship board fires, MNZ's Look Out! magazine has published 12 separate articles outlining the risks associated with fire onboard ships and the possible measures used to avoid them.