

# Part 3G: Radio Equipment Rules

## Proposal Summary for Consultation

This document is part of a series of documents to support consultation on changes to the existing Design, Construction and Equipment rules (the DCE rules). Other documents that form part of the consultation package include:

- *Invitation to Comment* - An overview of the consultation package and summary of the proposals, including information on how to have your say on the proposals.
- *Proposal summaries* - Details of the proposed changes for each of the four Rule topics being consulted on in this package: Watertight and Weathertight; Stability, Drainage, Freeboard, and Subdivision; Electrical; and Radio Equipment. This document is the proposal summary for Radio Equipment.
- *Draft Maritime Rules* and *draft Maritime Transport Instruments (MTIs)* – a set of rules and MTIs for each of the four Rule topics.
- A template to support preparation of your submission.

**These documents, and other supporting information, can be accessed at [www.maritimenz.govt.nz/public/consultation/DCE-40-series-package-2/](http://www.maritimenz.govt.nz/public/consultation/DCE-40-series-package-2/)**

**Note:** *This document refers to maritime incidents where people were injured or died. Specific incidents include the I Catcher and the Enchanter.*

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## Purpose of this document

1. Maritime New Zealand - Nō te rere moana Aotearoa (Maritime NZ) is proposing significant reform of the Maritime Rules for vessel design, construction and equipment (the DCE Rules) for domestic commercial vessels.
2. This document provides the detailed analysis of the proposed new Radio Equipment Rules and Maritime Transport Instrument (MTI). It explains our understanding of the issues and current situation (the 'status quo') under the present rules and sets out the analysis and rationale behind the proposed changes. Any potential impacts we have identified from the proposed amendments are also described. The information included is intended to meet the Government's Regulatory Impact Analysis requirements.
3. This document should be read in combination with the Invitation to Comment (which provides an overview of the proposed changes) and other documents that form part of the consultation package, available on Maritime NZ's website at [www.maritimenz.govt.nz/public/consultation/DCE-40-series-package-2/](http://www.maritimenz.govt.nz/public/consultation/DCE-40-series-package-2/).

Note: The word 'ship' is used in the Maritime Transport Act 1994 and the proposed Rules and MTIs. This term is used to refer to any kind of boat or craft and does not refer to a craft of a specific size. For the avoidance of doubt, the terms vessel, ship and boat can be used interchangeably. This document uses the term 'vessel'.

## Introduction to Radio Equipment

4. Radio equipment on a commercial vessel is critical to safety. A vessel must be able to receive safety information, call for assistance in an emergency and respond to other vessels in the vicinity that may be in distress. When an incident occurs on a vessel, the potential consequences increase with distance from shore. Radio equipment requirements increase to reflect this risk. The type of equipment required also changes to ensure that the equipment required can send and receive messages in the area in which the vessel operates.
5. The proposed approach to the new Radio Equipment Rules aligns requirements across the rules for passenger, non-passenger, fishing and sailing vessels, where practical.

## Summary of proposed changes to the radio rules

### Harmonising and consolidating

6. In general, the DCE rules are being harmonised and consolidated across vessel types to reduce duplication and complexity and improve consistency. As part of this change, the rules for radio equipment have been re-organised, as the new rule structure will not have separate rules for passenger, non-passenger, fishing, and sailing vessels.

7. The current rules are found in ten different locations largely based on vessel type.<sup>1</sup> Much of this content is the same or similar and is repeated across the rules for different vessels. The reason for differences between vessel types is often unclear.
8. In most cases, harmonising requirements involves minor wording changes that have no impact on vessel owners and operators.

### Updating

9. The current rules are almost 25 years old. Some content is out of date, including references to standards and regulations incorporated into the rules. The main proposed updates are noted below.
  - **Name change to 'Radio Equipment'**. This title is straightforward and covers radio and the equipment associated with radio. The current rules use four different terms.
  - **Recognising other Global Maritime Distress and Safety System (GMDSS) satellite service providers**. For example, Iridium.
  - **Aligning radio operator qualifications**. These are set out in the Radiocommunications Regulations 2001 and Radio Spectrum Management requirements, which are administered by the Ministry of Business, Innovation, and Employment.

### Removing duplication

#### Flares

10. The current Radio rules include the following requirements for flares.
  - Passenger and non-passenger vessels operating in enclosed water limits require flares.
  - Dive boats operating in enclosed water limits under a safe operating plan (SOP) may carry flares as an option.
  - Fishing boats operating under a SOP have the option of carrying flares if operating in enclosed water limits and must carry flares if operating beyond enclosed limits.
  - Sailing vessels operating in enclosed water limits may carry flares instead of an EPIRB.
11. The performance requirements for these flares are identical to the requirements for flares under lifesaving appliances (LSA) rules. The proposed new LSA rules comprehensively address flares, and there is no need to duplicate the same requirements under Radio Equipment rules.

#### Electrical Energy

12. The current Radio Rules include requirements to ensure that electrical energy is always available to supply radio equipment.<sup>2</sup> This is an essential requirement, but unfortunately the rules as drafted have had the unintended consequence of applying to all equipment on

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<sup>1</sup> Part 40A and Appendices 5 and 8 of Part 40A (passenger vessels); Part 40C and Appendix 4 of Part 40C (non-passenger vessels); Part 40D and Appendices 3 and 5 of Part 40D (fishing vessels); Part 40E and Appendix 5 of Part 40E (sailing vessels).

<sup>2</sup> These requirements are found in Appendix 5 of Part 40A, Appendix 4 of Part 40C, Appendix 3 of Part 40D and Appendix 5 of Part 40E.

a vessel that could draw electric current. This has required vessels to carry high battery storage capacity, which in turn has led to sector concerns that the required battery banks are expensive, heavy, and take up valuable space; and that the 12-hour requirement is unnecessary for vessels operating close to shore. A Class Exemption to address these matters has been issued.<sup>3</sup>

13. To avoid future confusion, the proposed new Radio Equipment Rules will refer to the Electrical Rules, which will contain the requirements for main and alternative sources of electrical power on a vessel, including requirements for radio equipment.

### **Fishing vessels of 24 metres or more in length will be directed to the rules for Cape Town fishing vessels**

14. The general approach to the reform of the DCE rules will be to direct fishing vessels of 24 metres or more in length to the rules that apply to New Zealand Cape Town Vessels, found in Part 404 Design, Construction, and Equipment - New Zealand Cape Town Vessels and Foreign Cape Town Vessels.
15. Part 404 applies to fishing vessels that operate in the unlimited area. The proposed approach means that new and existing fishing vessels of 24 metres or more in length would operate under Part 404 even if they do not operate in the unlimited area and are not classed as a Cape Town Fishing Vessel. The New Zealand fleet has less than 40 fishing vessels of 24 metres or more in length, so it makes sense to have one set of rules that apply to vessels this size.
16. As part of this proposal, the DCE rules and Part 404 are being checked for alignment. If necessary, amendments to Part 404 will be proposed as part of the final package of DCE rules, targeting consultation in 2026.

### **Main changes proposed**

17. The main changes proposed in the new Radio Equipment Rules and Maritime Transport Instrument are summarised below. The tables in the next section describe the rationale for the proposals and potential impacts in more detail.
  - **Proposal 1: On some passenger vessels the master would need to carry a means of communication.** Cell phones have been successfully used on many occasions to call for help following an incident. This has prompted the proposal to require the master to carry a means of communication, as a low cost means of saving lives.
  - **Proposal 2: More vessels would need to carry an Emergency Position Indicating Radio Beacon (EPIRB), and all EPIRBs would need to meet new performance specifications.** Many commercial vessels currently require an EPIRB, which are a cost-effective and reliable means of indicating distress and prompting rescue in an emergency. Under the proposed rules:
    - o up to 325 additional vessels in the fleet would need to carry an EPIRB
    - o more vessels would need to carry an EPIRBs of a type that is 'float-free'
    - o all EPIRBs would need to operate on 406 MHz; be GNSS enabled; and be provided with an Automatic Identification System (AIS) system.

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<sup>3</sup> Refer EXA-940 Maritime Transport (Class Exemption — Radiocommunication Equipment) Notice 2023.

- **Proposal 3: Radio equipment requirements for dive boats and fishing boats operating under a SOP would align with the requirements for other vessels.** Under the proposed rules, the radio equipment requirements for Dive Boats and Fishing Boats operating under a SOP would be the same as the requirements that apply for other vessels of the same or similar size that operate in the same operating area.
- **Proposal 4: Clarifying mobile satellite ship-earth station requirements for vessels that proceed beyond offshore limits.** This proposal clarifies the requirements for a vessel to carry a ship-earth station. The key change is that the requirement would be determined by whether a specified vessel travels beyond the offshore limits rather than whether it intends to undertake an international voyage.
- **Proposal 5: Clarifying AIS-SART / Radar Transponder requirements for vessels that proceed beyond offshore limits.** This proposal clarifies the requirement for a vessel to carry an AIS-SART or radar transponder. The key change is that the requirement would be determined by whether a vessel travels beyond the offshore limits rather than whether it intends to undertake an international voyage.

18. The tables in the next section provide a summary of the proposed changes, the rationale for those changes and potential impacts.

## Implementation

19. The Rule and MTI that will implement this proposal are set out below.

- Part 3G: Maritime (Design, Construction and Equipment – Radio Equipment) Rules [year].
- Maritime Transport (Radio Equipment) Instrument [year].

## Timing / Commencement date

20. The Rules and MTI are expected to come into force in 2026. Note that this date is subject to analysis of submissions received during consultation, and Ministerial agreement to any changes subsequently made in response.

21. Under Proposal 2, an existing vessel would have five years to meet the new requirements for EPIRBs. A vessel that already carries an EPIRB would need to meet the new requirements when their EPIRB battery expires or within five years – whichever comes first.

## Products envisaged to support implementation

22. Maritime NZ will provide a short guide for the sector explaining the changes introduced by the new Radio Equipment Rules.

## What do the changes mean for my ship/vessel/boat?

23. A 'snapshot' of the proposed changes to the radio rules is included in Appendix 1 to this document.

Please note that this document sets out the main changes that are proposed but does not include all changes that may have an impact on an operation. Therefore, we strongly recommend you also refer to the draft rule and maritime transport instrument.

## Proposal 1: The master on some passenger vessels would need to carry a means of communication on their person

### What we are proposing

The master of every passenger and sailing vessel of less than 12 metres in length that does not proceed beyond the inshore limit would need to carry one of the following:

- a cellular phone - if the vessel operates within cell phone coverage
- a hand-held (i.e. portable) VHF radio - if the vessel operates in an area where the hand-held radio has sufficient range to make a call on channel 16
- a personal locator beacon (PLB).

This requirement would be in addition to other means of communication carried on the vessel.

A **cellular phone** (if carried) would need to be:

- waterproof or in a waterproof bag
- always turned on during a voyage
- capable of operating where the vessel is located during a voyage
- kept charged for the duration of the voyage.

A **hand-held radio** (if carried) would need to be:

- waterproof
- capable of making a distress or safety call from the area where the vessel is located during a voyage
- capable of being recharged or have sufficient battery capacity to operate for the duration of the voyage
- not capable of interfering with other radiocommunication equipment the vessel is required to carry.

A **PLB** (if carried) would need to be:

- waterproof
- battery operated
- capable of operating as intended in all locations during a voyage
- comply with AS/NZS 4280.2: Global maritime distress and safety system (GMDSS), Part 2: 406 MHz Satellite Personal Locator Beacons (PLBs).

### Status quo

#### The current rules / regulatory environment

The current rules do not require the master to carry a means of communication. SOP dive boats and fishing boats, and other vessels operating in enclosed water limits, are required to carry at least two means of communication. The options include a cellular phone, and a VHF radio - but not of a kind that is hand-held. The current rules do not refer to or require PLBs.

**Our understanding of current practice**

Anecdotally, the master and/or crew on some vessels carry a PLB, and many carry cell phones. Data on the number of people who do so is not available.

**What is the problem / rationale for the change?**

Sudden capsize incidents on passenger vessels occur periodically in New Zealand. While the number of these incidents is not high, they occur with sufficient frequency to be considered predictable. A capsize event is serious.

This proposal applies to passenger vessels because passengers are more vulnerable than crew to harm if an incident occurs. While crew must be assessed as medically fit, passengers can be of all ages and levels of fitness and have no control over the vessel. Five of the six incidents in the table below involved multiple passenger fatalities, and the incidents all occurred in enclosed waters or inshore waters.

The threshold of less than 12 metres has been proposed because it will address most vessels at risk. Smaller vessels are more likely than larger vessels to capsize. The average length of a passenger vessel in the New Zealand fleet is just under 12 metres in length overall (11.99 metres). More than 60% of all passenger vessels are less than 12 metres in length, and 99% of passenger vessels that operate in enclosed waters or inshore waters are less than 12 metres in length.

The design of larger vessels works to reduce the likelihood of capsizing. They tend to have greater freeboard; enclosed weather decks are designed to shed water; and coaming, vent, and sill heights reduce the likelihood of down flooding. On a larger vessel the master is less likely to be swept overboard, so radio equipment on board will be available if an incident occurs.

**Table 1: Incidents involving passenger fatalities**

Date	Vessel	Length	Operating area
2012	Easy Rider	11m	Inshore (a)
2016	Francie	12m	Inshore / Enclosed (bar crossing)
2019	Henerata	7.5m	Enclosed
2021	Enchanter	16m	Inshore
2021	unnamed recreational vessel	5.5m	Inshore / Enclosed (bar crossing)
2023	I-Catcher	8m	Inshore (a)

Several of the incidents in Table 1 have highlighted the value of having a readily accessible means of communication when a sudden incident occurs.

- The I-Catcher capsized suddenly in 2023 with the master and 10 passengers on board. The master used a cellular phone owned by a passenger to call for help.

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- An unnamed recreational vessel capsized on the Manukau Harbour bar in 2021 with four people on board. A survivor used a cell phone to call 111 for help.
- The Enchanter capsized in 2021 with 10 people on board after being suddenly hit by a freak wave. The speed of the incident precluded using the radio to call for help, but due to good fortune a crew member was able to retrieve and activate an EPIRB.

### Impact of the proposed change

The impact of the proposed change varies depending on the size and type of a vessel and where it operates. These are outlined below.

#### **Passenger and sailing vessels of 6 metres or less that do not operate beyond enclosed water limits (~ 50 vessels)**

Minimal impact. The master would need to carry a means of communication. However, the same number of items would be required for the vessel overall, and the options already include a cell phone and a VHF radio.

#### **Passenger and sailing vessels of more than 6m and less than 12 metres that do not operate beyond enclosed water limits (~ 100 vessels). Passenger and sailing vessels of less than 12 metres that proceed beyond enclosed water limits but not beyond inshore limits (~ 280 vessels)**

Minor impact. The proposal for these vessels would result in an increase in radio equipment requirements by 1 item, as the master on a vessel would need to carry a means of communication. For vessels that operate within cell phone coverage, it is likely that the master will already have a cell phone. Where cell phone reception is not available or the operator prefers other options, a hand-held VHF radio costs \$200 - \$500, and a personal locator beacon costs around \$500.

### Options analysis

The following three options were considered.

Option 1: (Status quo). Rules do not require the master to carry a form of communication.

Option 2: New rules that require the master on every vessel to carry a form of communication.

Option 3: (Preferred option). New rules that require the master to carry a form of communication on passenger and sailing vessels of less than 12 metres in length overall that do not operate beyond inshore limits.

**How do the options compare against the status quo**

The following criteria have been used to assess the alternative option. Refer to Table 2 for an assessment against these criteria.

<i>The changes provide flexible and adaptive regulation:</i>	Options 2 and 3 are adaptive because they would introduce new rules to address a known risk. The requirements would be specified in the MTI, which will be easier to amend in response to further developments, compared to having the requirements in rules.
<i>Rules are clear and easier to understand and apply:</i>	Options 2 and 3 would provide a clear threshold for the application of the new requirement.
<i>Maritime safety is maintained or enhanced:</i>	Options 2 and 3 would improve safety by ensuring that the master of a vessel would be able to call for help following a sudden capsized event.
<i>Changes are practical and economically viable:</i>	<p>Option 3 is practical to implement. The proposed forms of communication are readily available and relatively inexpensive. The master will often already carry a cell phone, so in many cases the only cost would be a means of keeping the phone waterproof.</p> <p>The broad application of Option 2 means that it would impose additional costs for vessels where the risks are lower, and benefits may not be realised.</p>

**Table 2: Comparing options against the status quo. New rules that require the master to carry a form of communication on passenger and sailing vessels of less than 12 metres that do not operate beyond inshore limits**

	1. Status Quo	2: Rules require the master on every vessel to carry a form of communication	3. Rules require the master to carry a form of communication on passenger and sailing vessels of less than 12 m that do not operate beyond inshore limits
Provides flexible and adaptive regulation	0	+	+
Rules that are clear and easier to understand and apply	0	+	+
Maritime safety is maintained or enhanced	0	+	+
Changes are practical and economically viable	0	+	++
<b>Overall assessment</b>	<b>0</b>	<b>+</b>	<b>++</b>

**Key for qualitative judgements:**

- ++ Much better than doing nothing/the status quo/counterfactual
- + Better than doing nothing/the status quo/counterfactual
- 0 About the same as doing nothing/the status quo/counterfactual
- Worse than doing nothing/the status quo/counterfactual
- Much worse than doing nothing /the status quo/counterfactual

Preferred option
The preferred option is Option 3. Introducing new rules that require the master to carry a form of communication on passenger and sailing vessels of less than 12 metres that do not operate beyond inshore limits. It meets all criteria, improves safety and is more targeted and achieves a better balance of costs and benefits than Option 2.
What are the marginal costs and benefits of the preferred option?
Sudden serious capsized incidents on small passenger vessels occur periodically in New Zealand. These incidents have resulted in multiple fatalities, and access to a readily available means of communication has been shown to save lives.
The costs of this proposal for around 50 passenger and sailing vessels of 6 metres or less that do not operate beyond enclosed water limits is expected to be minimal. The number of

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communication items required for these vessels is not proposed to change, and the master of these vessels is likely to already carry a cell phone.

The proposal would require an increase in radio equipment requirements by one item for around 280 passenger and sailing vessels of:

- more than 6 metres and less than 12 metres that do not operate beyond enclosed water limits
- less than 12 metres that proceed beyond enclosed water limits but not beyond inshore limits.

For some of these vessels, the master will already carry a cell phone, and the costs would be minimal. Vessels that operate outside of cell phone coverage would require a hand-held VHF radio or a personal locator beacon costing \$200 – \$500. Data is not available on the mix of radio equipment these vessels currently carry, but some are expected to already have these items.

**Table 3: Marginal costs and benefits of new rules that require the master to carry a form of communication on passenger and sailing vessels of less than 12 metres that do not operate beyond inshore limits**

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional costs of the preferred option compared to taking no action</b>			
Vessel operators	The master on some passenger vessels would need to carry a form of communication. <sup>4</sup>	\$200 – \$500. In many cases the master will be able to carry a cell phone.	Medium The number of operators impacted is difficult to quantify. Data on the mix of radio equipment carried is not available.

<sup>4</sup> Would apply to an unknown percentage of around 280 vessels that are more than 6 metres and less than 12 metres in length that do not operate beyond enclosed water limits; or that are less than 12 metres in length that proceed beyond enclosed water limits but not beyond inshore limits.

**Additional benefits of the preferred option compared to taking no action**

People who work on or travel on small passenger or sailing vessels that operate within inshore limits	The proposal would increase safety by improving the likelihood of rescue following a sudden incident.	Medium The measure addresses low frequency but high consequence events.	Medium Readily accessible communication devices have been shown to make a difference.
Rescue Coordination Centre and Search and Rescue organisations	The proposal would support better response and more successful outcomes.		

**Question:**

R 1.1 Do you agree that the master of every passenger and sailing vessel of less than 12 metres in length that does not proceed beyond the inshore limit should carry a means of communication (cell phone, portable VHF radio or PLB) on their person?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

## Proposal 2: More vessels would need to carry an EPIRB, and all EPIRBs would need to meet new performance specifications

### What we are proposing

#### Requirement to carry an EPIRB

Under this proposal, all vessels would need to carry an EPIRB except vessels of 6 metres or less that do not operate beyond enclosed water limits. Carrying an EPIRB is currently optional for around 330 commercial vessels operating in enclosed water limits and would remain optional as these vessels operate close to land.

EPIRBs would need to be float-free unless an exception applies. A manually activated EPIRB would be allowed for:

- vessels of less than 12 metres in length operating in restricted limits
- dive boats and fishing boats operating under a SOP
- passenger vessels operating in inshore limits that do not have a space for an EPIRB hydrostatic release unit that cannot be accessed by passenger
- other vessels operating in inshore limits that do not have a suitable protected space for a hydrostatic release unit.

#### Changes to EPIRB performance requirements

All EPIRBs would need to comply with either:

- AS/NZS 4280.1:2022 – except that the EPIRB must be GNSS enabled
- the relevant performance standards referred to in Regulation 14 of Chapter IV of SOLAS.

The key requirements are that all EPIRBs would need to –

- operate on 406 MHz
- be GNSS enabled
- be provided with an Automatic Identification System (AIS) locating signal in accordance with the International Telecommunication Union Recommendation ITU-R M.1371.<sup>5</sup>

#### Transition arrangements

The proposed new requirements would apply from five years after the date the new Radio Equipment Rules commence, or sooner if the battery on an existing EPIRB expires and the EPIRB needs to be replaced.

<sup>5</sup> M.1371: Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile frequency band.

**What is the problem / rationale for the change?**

**Safety**

EPIRBs are a cost-effective appliance deployed in many thousands of distress situations internationally and domestically. The rescue of the Enchanter survivors is a well-known example. Once activated, the EPIRB transmits a signal which is relayed via satellite to the rescue coordination centre – which arranges rescue.<sup>6</sup> EPIRBs are more reliable than personal locator beacons (PLBs) or cell phones in terms of signal transmission and beacon location.

**Float-free**

A float-free EPIRB offers a better chance of rescue compared to a manual model because it does not rely on a person to be activated. The EPIRB is automatically released by a hydrostatic unit when it has sunk to a certain depth, and switches on automatically when it floats to the surface. A float-free EPIRB can also be switched on manually. A float-free EPIRB costs around \$800.

The proposed new rules recognise that a manually released EPIRB is a better option than a float-free EPIRB in some situations. Some small vessels may lack a suitable place to fix the hydrostatic release unit, and some passenger vessels may lack a suitable space away from passengers (who may be tempted to tamper with the unit). In an emergency, a person removes a manually released EPIRB from storage, switches it on, and takes it with them if they abandon the vessel. A manually released EPIRB costs around \$400.

**GNSS capability**

Under the proposed rules, the performance specifications for EPIRBs would require Global Navigation Satellite System (GNSS) capability for all EPIRBs, which enables an EPIRB to be quickly located to within 100 metres. This contrasts with some existing models, in which the signal may not be picked up by a satellite for several hours, delaying rescue; and location may only be accurate to within 2 kilometres. This can make it hard for rescuers to see victims, particularly in rough seas.

**406 MHz operating frequency**

International rules now only recognise signals transmitted on 406 MHz, and the rules are being updated to reflect this. Under the current Maritime Rules, some vessels are allowed to carry an EPIRB that operates on 1.6 GHz.

**AIS locating signal**

AIS provides a radio beacon that is visible to vessels in the area and to passing planes, which can then provide direct assistance or relay calls for help.<sup>7</sup> EPIRBs manufactured to AS/NZS 4280.1:2022 and SOLAS Chapter IV Regulation 14 meet this requirement, but older models may not.

<sup>6</sup> Rescue coordination centres are operated by different states under the International Convention on Maritime Search and Rescue (SAR), administered by the IMO. The world is divided into 13 search and rescue areas. The Rescue Coordination Centre New Zealand (RCCNZ) is responsible for a large area of the Pacific Ocean, from the South Pole to near the equator.

<sup>7</sup> AIS operates independently of the GNSS capability.

**Status quo and impact of the proposed change**

**Proposed EPIRB requirements for vessels of 6 metres or less that do not operate beyond enclosed water limits**

The impacts of this proposal are minimal.

- Carrying an EPIRB is currently optional and would remain optional.
- Operators who choose to carry an EPIRB would continue to have a choice of carrying a model that is either manual or a float-free.
- An EPIRB that is new to the vessel (including a replacement to an existing EPIRB) must meet the new performance requirements i.e. must operate on 406 MHz, be GNSS enabled, and have AIS functionality.

EPIRBs currently sold in New Zealand meet the required performance standards. When operators choose to carry an EPIRB and come to replace it, a new model sold in New Zealand will comply<sup>8</sup>.

**Proposed EPIRB requirements for vessels of more than 6 metres that do not operate beyond enclosed water limits**

- The vessel would need to carry an EPIRB. This is currently optional.
- The EPIRB would need to be float-free unless the vessel is less than 12 metres in length or it is impractical to fit a hydrostatic release unit.
- All EPIRBs must operate on 406 MHz, be GNSS enabled and have AIS functionality.
- Operators would have five years or when the battery of an existing EPIRB expires to meet the new requirements.

Up to 185 vessels of more than 6 metres operate solely within enclosed water limits. Many could be impacted by this proposal, either because they need to purchase an EPIRB or replace an existing EPIRB that is not GNSS enabled.<sup>9</sup> Around 135 would have the option of carrying a manual EPIRB, at a cost of around \$400; and around 50 are 12 metres or more in length and would require a float free EPIRB at a cost starting at around \$800.

**Proposed EPIRB requirements for vessels that proceed beyond enclosed water limits but not beyond VHF coverage**

- The vessel would need to carry an EPIRB. This is the same as the current rules.
- The EPIRB would need to be float-free unless the vessel is less than 12 metres in length and does not proceed beyond restricted limits; or is a fishing or dive boat operating under a SOP; or it is impractical to fit a hydrostatic release unit.

<sup>8</sup> Other jurisdictions, including Australia, allow different specifications for EPIRBs. Operators purchasing an EPIRB from overseas will need to check that the model they want to buy has the correct specifications.

<sup>9</sup> 130 passenger and non-passenger vessels of less than 12m in length; 50 passenger and non-passenger vessels of 12m or more; 3 fishing vessels less than 12m; 1 sailing vessel less than 12m; 1 sailing vessel 12m or more. Data is not available on the mix of communication items that these vessels currently carry.

- All EPIRBs would need to operate on 406 MHz. This is the same as the current rules.
- All EPIRBs would need to be GNSS enabled and have AIS functionality. These are new requirements.
- Operators would have up to five years to meet the new requirements.

Around 1,300 vessels<sup>10</sup> proceed beyond enclosed water limits but not beyond VHF coverage.

- Around 780 vessels are less than 12 metres in length and do not proceed beyond restricted limits. The requirement to have an EPIRB remains the same. The five year transition period means that any additional costs for operators who need to replace their EPIRB with a model that meets the performance requirements would be minimal.
- Around 515 vessels would need to carry a float-free EPIRB either because they are 12 metres or more in length or they proceed beyond restricted limits / inshore fishing limits. Some of these vessels would need to replace a manual EPIRB with a float-free model at an additional cost of \$400.<sup>11</sup>

### **Proposed EPIRB requirements for vessels that proceed beyond VHF coverage**

All vessels that proceed beyond VHF coverage would have the same EPIRB requirements.

- The vessel would need to carry an EPIRB. This is the same as the current rules.
- The EPIRB would need to be float-free. This is a change for many vessels.
- An EPIRB would need to operate on 406 MHz. The current rules allow 1.6 GHz EPIRBs.
- An EPIRB would need to be GNSS enabled and have AIS functionality. This is a change for non-fishing vessels.

An estimated 300 vessels proceed beyond VHF coverage.<sup>12</sup>

- **Around 235 fishing vessels operate beyond VHF but not beyond offshore limits.** These vessels currently require either a manual or a float-free EPIRB operating on 406 MHz. When it comes time to replace the EPIRB, the vessels that carry a manual EPIRB would need to replace it with a float-free model at an additional cost of \$400.<sup>13</sup>

**Around 25 fishing vessels operate in the unlimited area.** These vessels currently require a float-free EPIRB operating on either 406 MHz or 1.6 GHz. EPIRBs that operate on 1.6 GHz would need to be replaced with a model that operates on 406 MHz. The proposed five year transition period means that the cost of replacement would be minimal because in many cases it would coincide with the expiry of the vessel's existing EPIRB.

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<sup>10</sup> VHF extends to 40 – 50 nautical miles (NM). The coastal limit extends to 50 NM. Vessels certified to coastal limits have been excluded from the estimate, and vessels certified to restricted coastal have been included.

<sup>11</sup> Around 70 are fishing vessels, which already require a float-free EPIRB. Approximately 234 non-passenger vessels, 200 passenger vessels and 9 sailing vessels currently may carry either a manual or a float-free EPIRB. Data is not available on the type of EPIRB these vessels currently carry.

<sup>12</sup> To develop an estimate, vessels allocated coastal limits have been included in the estimate, and vessels allocated restricted coastal have been excluded.

<sup>13</sup> Data is not available on the type of EPIRB these vessels currently carry.

- **Around 4 passenger vessels, 18 non-passenger vessels and 2 sailing vessels operate beyond VHF coverage but not beyond offshore limits.** These vessels currently require a float-free EPIRB operating on either 406 MHz or 1.6 GHz. EPIRBs that operate on 1.6 GHz would need to be replaced with a model that operates on 406 MHz. The proposed five year transition period means that the costs of replacement would be minimal.
- **Around 1 passenger and 14 non-passenger vessels operate in the unlimited area.**
  - o five are non-passenger vessels of 300 gross tonnage or more. These vessels are already required to meet the radio requirements specified under SOLAS Chapter IV (i.e. no change).
  - o The remaining 10 vessels currently require a float-free EPIRB operating on either 406 MHz or 1.6 GHz. EPIRBs that operate on 1.6 GHz would need to be replaced with a model that operates on 406 MHz. The proposed five year transition period means that the costs of replacement would be minimal.

### Options analysis

Three options were considered.

Option 1: (Status quo). Float-free is optional for most vessels that require an EPIRB. EPIRBs are not required to be GNSS enabled, so response times may be slow and location accuracy may be poor. Some vessels may carry EPIRBs that operate on frequencies that are not supported by the International Maritime Organisation (IMO) or the Global Maritime Distress and Safety System (GMDSS).

Option 2: All vessels must carry a float-free EPIRB that operates on 406 MHz, is GNSS enabled and has AIS functionality.

Option 3: (Preferred option). Most vessels must carry an EPIRB, but exceptions apply where the risk is lower – i.e. for vessels of 6 metres or less that do not operate beyond enclosed water limits. EPIRBs must be float-free, but exceptions apply for small vessels operating close to shore and where fitting a hydrostatic release unit is impractical. All EPIRBs must operate on 406 MHz, be GNSS enabled and have AIS functionality.

**How do the options compare against the status quo**

The following criteria have been used to assess the alternative options. Refer to Table 4 for an assessment against these criteria.

*The changes provide flexible and adaptive regulation:*

Option 3 is adaptive. It would revise the current rules to reflect changes to IMO rules and improvements in GMDSS technology (406 MHz and GNSS enabled). The performance requirements are contained in the MTI, which can be more readily adjusted in response to future changes.

Option 3 is flexible. It recognises that not all vessels should be required to carry an EPIRB, and that the float-free solution is not appropriate for all vessels.

*Rules are clear and easier to understand and apply:*

Option 3 is clear and easy to understand. All requirements are in one place and the thresholds and technical references are clearly described.

*Maritime safety is maintained or enhanced:*

Under Option 3 an estimated additional 185 vessels would need to carry an EPIRB - a reliable means of indicating distress and prompting rescue. Requiring all EPIRBs to operate on 406 MHz and be GNSS enabled would ensure that a recognised frequency is used to signal distress, and that the source of transmission is quickly identified and accurately located.

Option 3 is risk-based. EPIRBs are not proposed for vessels of 6 metres or less that operate in enclosed water limits where the risk is lower. Float-free EPIRBs are not proposed for vessels of less than 12 metres in length that operate in restricted limits, or where fitting a hydrostatic release unit is impractical.

Requiring all vessels to carry a float free EPIRB (Option 2) might achieve a stronger safety result for the approximately 140 lower risk vessels of 6 metres or less in length that do not operate beyond enclosed water limits. However, the increase in safety could be marginal and may not justify the imposition of additional costs.

*Changes are practical and economically viable:*

Option 3 is practical to implement. It references established SOLAS requirements and the Australia New Zealand standard AS/NZS 4280. EPIRBs being sold in New Zealand now meet these standards. The proposed five year transition period equals the lifespan for many or most EPIRBs, so the proposals are cost-neutral or would impose minimal costs.

Up to 185 additional vessels would need to carry an EPIRB (although some will already carry one). 135 of these vessels would have the option of carrying a manual EPIRB at a cost of

## Radio Equipment Proposal Summary

around \$400; and 50 vessels of 12 metres or more in length would require a float-free EPIRB at a cost starting at around \$800.

Carrying an EPIRB remains optional for approximately 140 vessels of 6 metres or less in length that do not operate beyond enclosed water limits (i.e. close to shore).

**Table 4: Comparing options against the status quo. Proposed requirements for EPIRBs**

	1. Status Quo	2: All vessels carry an EPIRB that is float-free, 406 MHz; GNSS enabled; & has AIS	3. (Preferred option). Most vessels carry a float-free EPIRB. Manually released EPIRBs apply for some vessels. All EPIRBs are 406 MHz, GNSS enabled & have AIS
Provides flexible and adaptive regulation	0	+	++
Rules that are clear and easier to understand and apply	0	+	+
Maritime safety is maintained or enhanced	0	+	+
Changes are practical and economically viable	0	+	++
<b>Overall assessment</b>	<b>0</b>	<b>+</b>	<b>++</b>

**Key for qualitative judgements:**

- ++** Much better than doing nothing/the status quo/counterfactual
- +** Better than doing nothing/the status quo/counterfactual
- 0** About the same as doing nothing/the status quo/counterfactual
- Worse than doing nothing/the status quo/counterfactual
- Much worse than doing nothing/the status quo/counterfactual

### Preferred option

Option 3 is the preferred option. It would deliver safety benefits while providing a balanced approach to risk, cost and practicality. Option 3 would require most vessels to carry a float-free EPIRB but allow manually released EPIRBs for small vessels operating close to shore or where float-free is impractical. All EPIRBs would need to be 406 MHz, GNSS enabled and have AIS.

**What are the marginal benefits and costs of the preferred option?**

Under the proposal, up to 185 more vessels would need to carry an EPIRB, which is a cost-effective means of indicating distress and helping to save lives at sea.

All EPIRBs would properly integrate into the global maritime distress safety system. GNSS and AIS functionality would provide faster response time and more accurate beacon location. These changes to the performance requirements would be cost-neutral or would impose minimal costs for most vessels in the fleet.

The proposals would add costs for up to 185 vessels that do not currently require an EPIRB (although it is thought that some already carry one).

- Up to an additional 135 vessels would need to carry a manual EPIRB, at a cost of around \$400.
- Around 50 vessels of 12 metres or more in length would require a float-free EPIRB at a starting cost of around \$800.

**Table 5: Marginal costs and benefits of proposed requirements for EPIRBs**

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional costs of the preferred option compared to taking no action</b>			
Operators of vessels of more than 6m that do not proceed beyond enclosed water limits	Up to 135 vessels would need to carry a manual EPIRB.	Around \$400	High Based on Maritime NZ vessel data and internet retail costs of EPIRBs.
	Up to 50 vessels would need to carry a float-free EPIRB.	Around \$800	
Operators of vessels 12m or more in length or that proceed beyond restricted limits / inshore limits	Some vessels may need to replace a manual EPIRB with a float-free model.	Additional cost of \$400	Medium Cost estimate is reasonable, but the actual numbers affected are not known.
Operators of vessels that proceed beyond VHF coverage	Some would need to replace manual EPIRBs with a float-free model; or replace a 1.6GHz model with a 406 MHz model.	Additional cost of \$400	Medium Cost estimate is reasonable, but the actual numbers affected are not known.

**Additional benefits of the preferred option compared to taking no action**

Persons who work on or travel on a vessel	Would be rescued more quickly in a distress situation.	Medium EPIRBs are used to activate a response, but the numbers involved are not known.	High The benefits of the proposed performance requirements are well established.
Rescue Coordination Centre	Would identify distress situations more quickly if EPIRBs operate on 406 MHz and are GNSS enabled.		
Organisations involved in Search and Rescue	Would identify location of distress victims more quickly.		

**Questions:**

R 2.1 Do you agree that more vessels in the fleet should carry an EPIRB?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

R 2.2 Should smaller vessels and vessels where it is impractical to carry a float-free EPIRB be allowed to carry a manually activated EPIRB?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

## Proposal 3: Aligning requirements for dive boats and fishing boats operating under a safe operating plan (SOP) with the requirements for other vessels

### What we are proposing

Radio Equipment requirements for dive boats and fishing boats operating under a safe operating plan (SOP) would be the same as for any other vessel of the same size and type operating in the same area.

#### SOP boat of up to 6 metres that does not proceed beyond restricted limits

- The master would need to carry a PLB; or a portable VHF radio; or a cellular phone.
- The vessel would need to carry an EPIRB; or a VHF radio; or a cell phone.

The second item would need to be different from the item carried by the master. The vessel would also need to carry flares under the proposed new Life-saving Appliances Rules.

#### SOP boat that proceeds beyond enclosed waters but not beyond VHF limits

- The master would need to carry either a PLB; a portable VHF radio; or a cellular phone in waterproof case.
- The vessel would need to carry:
  - o an EPIRB (manual or float-free if less than 12 metres, and float-free if 12 metres or more)
  - o a VHF radio.

The second item would need to be different from the item carried by the master. The vessel would also need to carry flares under the proposed new Life-saving Appliances Rules.

### What is the problem / rationale for the change?

The current radio equipment requirements for dive boats and fishing boats operating under a SOP appear to set lower requirements than apply to similar vessels operating in the same area. The rationale for this approach does not appear to be risk-based. In addition, having different rules for similar vessels adds unnecessary complexity. The general approach to the reform of the DCE rules is that:

- similar vessels operating in the same or a similar location should meet the same or similar requirements because they face the same or similar risks
- requirements should be consolidated and harmonised to the extent practicable.

### Impact of the proposed change

Under the proposal, SOP dive boats and fishing boats would continue to require two means of communication, but the mix of equipment carried would change. The master would need to

carry a means of communication, and flares and distress sheets would no longer count as means of communication.

**Master to carry a means of communication.** In around 13 SOP dive and fishing boats that operate beyond enclosed water limits the master would have to carry a means of communication on their person, which can be either a PLB, a portable VHF radio or a cellular phone. The impact is expected to be minor. The master is likely to already have a cell phone, and most vessels are likely to operate within cell phone coverage.

**The proposed options for what items may be carried do not include flares.** This could impact some SOP boats. Around 30 SOP dive and fishing boats have the option of counting flares as one of their communication equipment items. The current rules duplicate flare requirements under both the rules for radio and life-saving appliances. This duplication is being removed. Flares are now addressed in detail under the proposed new Life-saving Appliances Rules and would not continue as an option under the new Radio Equipment Rules.

**The proposed options for what items may be carried do not include distress sheets.** Less than 10 SOP fishing boats have the option of counting distress sheets as one of their communication equipment items. These are outdated technology of doubtful effectiveness and will not continue as an option under the proposed new rules.

### Options analysis

Two options were considered.

Option 1: (Status quo). SOP vessels have different radio equipment requirements to other vessels of the same size operating in the same area.

Option 2: (Preferred option). SOP vessels carry the same radio equipment as other vessels of the same size operating in the same area.

### How do the options compare against the status quo

The following criteria have been used to assess the options. Refer to Table 5 for an assessment against these criteria.

*The changes provide flexible and adaptive regulation:*

Option 2 is adaptive. It would remove outdated technology (distress sheets) as a radio communication option. Option 2 is flexible. Radio equipment requirements are specified in the MTI and could be revised in response to industry changes.

*Rules are clear and easier to understand and apply:*

Option 2 reduces unnecessary complexity. All requirements would be in one place and clearly described. Rule duplication, in the case of flares, would be removed.

*Maritime safety is maintained or enhanced:*

Option 2 improves safety by requiring at least two forms of radio communication (excluding flares, which would be required under the proposed Life-saving Appliances Rules. Distress sheets would be removed as they are outdated technology.

## Radio Equipment Proposal Summary

*Changes are practical and economically viable:*

Option 2 is straightforward and practical to implement. Some of approximately 30 SOP vessels might currently rely on flares or distress sheets for radio communication and could incur modest costs in changing to other options.

**Table 6: Comparing options against the status quo. Proposal to align requirements for SOP dive boats and fishing boats with the requirements for other vessels**

	1. Status Quo. SOP vessels have different radio equipment requirements to other vessels of the same size operating in the same area	2. Preferred option). SOP vessels carry the same radio equipment as other vessels of the same size operating in the same area
Provides flexible and adaptive regulation	0	+
Rules that are clear and easier to understand and apply	0	+
Maritime safety is maintained or enhanced	0	+
Changes are practical and economically viable	0	+
<b>Overall assessment</b>	<b>0</b>	<b>+</b>

**Key for qualitative judgements:**

- ++ Much better than doing nothing/the status quo/counterfactual
- + Better than doing nothing/the status quo/counterfactual
- 0 About the same as doing nothing/the status quo/counterfactual
- Worse than doing nothing/the status quo/counterfactual
- Much worse than doing nothing/the status quo/counterfactual

**Preferred option**

Option 2 (SOP vessels carry the same radio equipment as other vessels of the same size operating in the same area) is the preferred option. It would deliver consistent safety standards, reduces complexity and is straightforward to apply.

**What are the marginal costs and benefits of the preferred option?**

Up to 30 SOP dive boats and fishing boats could be impacted by the proposal. Some could face additional costs because they would no longer be able to count flares or distress sheets as part of their radio communication equipment, and would need an additional form of communication, such as an EPIRB or PLB at a cost of around \$400.

The proposal improves safety by removing the option of safety sheets which are outdated technology of doubtful effectiveness. It also improves the rules by removing duplication and inconsistency and reducing complexity.

**Table 7: Marginal costs and benefits of proposed to align requirements for SOP dive boats and fishing boats with the requirements for other vessels**

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional costs of the preferred option compared to taking no action</b>			
Owners and operators of up to 45 SOP dive boats and fishing boats	Some SOP boats would need to carry an additional form of communication.	Around \$400	Medium
<b>Additional benefits of the preferred option compared to taking no action</b>			
Persons who work on or travel on a SOP dive boat or fishing boat	May be safer if safety sheets are not relied on as a means of communication.	Low Safety sheets are only 1 form of communication.	Medium Only a small number of SOP boats have the option of using a safety sheet
Operators; surveyors and authorised persons; Maritime NZ staff	Rules are straightforward and consistent and therefore easier to apply.	Low Reduced transaction costs	Low Difficult to assess

**Question:**

R 3.1 Do you agree that SOP dive boats and SOP fishing boats should meet the same radio communication requirements as other vessels of the same size and type operating in the same area?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

## Proposal 4: Clarifying mobile satellite ship-earth station requirements for vessels that proceed beyond offshore limits

### What we are proposing

This proposal clarifies the requirements for a vessel to carry a 'ship-earth station'. The key change is that the requirement to carry a ship-earth station would be determined by whether a vessel travels beyond the offshore limits.

A recognised mobile satellite ship-earth station would be required for:

- passenger and sailing vessels that carry more than 12 passengers that proceed beyond offshore limits
- non-passenger vessels of 300 gross tonnage (GT) or more that proceed beyond offshore limits.

Fishing vessels that proceed beyond offshore limits would continue to require a ship-earth station (i.e. no change) under Part 404 Design, Construction, and Equipment – New Zealand Cape Town Vessels and Foreign Cape Town Vessels.

The recognised mobile satellite ship-earth station would need to:

- comply with Regulation 14 of Chapter IV of SOLAS
- be able to receive maritime safety information and search and rescue information throughout the entire voyage.

A recognised mobile satellite ship-earth station would not be required for a passenger vessel or a sailing vessel carrying 12 or fewer passengers or a non-passenger vessel of less than 300 GT.

### Status quo

Under the current rules.

- Fishing vessels that operate beyond offshore limits must carry a ship-earth station.
- Vessels that carry more than 12 passengers and vessels of 300 GT or more that carry cargo must carry a ship-earth station if they undertake an international voyage. These requirements align with SOLAS Chapter IV Radiocommunication requirements.

Around 10 non-fishing vessels in the New Zealand fleet are certified to operate in the unlimited area but do not meet the definition of a SOLAS vessel because they are less than 300 GT or carry 12 or fewer passengers. These vessels are not required to carry a ship-earth station. From a cost and benefit perspective, the overall cost of carrying a ship-earth station is high for a small non-fishing vessel and these smaller vessels carry a MF/HF radio and an EPIRB which are available for use in a distress situation.<sup>14 15</sup>

<sup>14</sup> A ship-earth station could cost \$7,000 to \$12,000 plus installation costs. Additional costs include employing a person qualified to operate the ship-earth station who holds a general radio operators' certificate and a Global Maritime Distress and Safety System (GMDSS) Radio Operator Certificate Of Competency.

<sup>15</sup> Three of these vessels choose to carry a ship-earth station and seven either do not carry a ship-earth station or it is not possible to tell from the available information.

**What is the problem / rationale for the change?**

SOLAS rules require a vessel to carry at least two means of transmitting and receiving distress and maritime safety information. A SOLAS vessel operating in the unlimited area / beyond offshore limits must carry a mobile satellite ship-earth station to meet this requirement.<sup>16</sup>

The rules for fishing vessels set a clear threshold – proceeding beyond offshore limits – for when a ship-earth station is required. However, the rules are less clear for other vessels. The reader needs to know when a vessel meets the definition of a ‘cargo ship’ or a ‘passenger ship’ under SOLAS - as this is not stated - and whether the vessel intends to undertake an international voyage. This is what the proposed rules will clarify.

**Impact of the proposed changes**

This proposal is a clarification and should not impact existing vessels.

**Options analysis**

Three options were considered.

Option 1: (Status quo). Reproduce the current rules.

Option 2: Require all vessels that proceed beyond offshore limits to carry a ship-earth station.

Option 3: (Preferred option) New rules that reflect the status quo but clarify how the current rules apply.

**How do the options compare against the status quo**

The following criteria have been used to assess the alternative option. Refer to Table 7 for an assessment against these criteria.

<i>The changes provide flexible and adaptive regulation:</i>	Options 2 and 3 both meet this criterion. Requirements are specified in the MTI and could be revised in response to industry changes.
<i>Rules are clear and easier to understand and apply:</i>	Options 2 and 3 both meet this criterion. Both options would clarify the application of requirements for a ship-earth station. All requirements would be in one place and clearly described.
<i>Maritime safety is maintained or enhanced:</i>	Option 2 would improve safety because all vessels operating in the unlimited area would require a mobile satellite ship-earth station. MF/HF radio is less reliable in the unlimited area as its functionality depends on conditions in the earth’s ionosphere, which fluctuate. Option 3 would maintain current safety standards. Smaller vessels would not need to carry a mobile satellite ship-earth station.

<sup>16</sup> SOLAS describes four ‘Sea Areas’ of radio coverage, and the number and type of radio equipment a vessel must carry is determined by the areas in which a vessel travels. A vessel operating in Sea Area A3 (which aligns to the unlimited area / beyond offshore limits) requires a ship-earth station to meet the requirement to have two means of radio communication available.

## Radio Equipment Proposal Summary

*Changes are practical and economically viable:*

Option 2 would increase safety, but a ship-earth station could cost \$7,000 to \$12,000 plus installation costs and the radio operator would incur significant costs obtaining a general radio operators' qualification and a GMDSS Radio Operator Certificate Of Competency. These additional costs may not be justified for smaller vessels operating in the unlimited area. The likelihood of an incident is low. The required MF/HF radio will generally be sufficient, and the EPIRB carried on vessel would provide backup in an emergency.

Option 3 clarifies when a ship-earth station must be carried and avoids imposing high costs on small vessels. Operators of small vessels that operate in the unlimited area can still choose to carry a ship-earth station even if the rules do not require it – and some already do so.

**Table 8: Comparing options against the status quo. Proposal to clarify ship-earth station requirements for vessels that proceed beyond offshore limits**

	1. Status Quo	2. All vessels that operate beyond offshore limits would need to carry a ship earth station	3. New rules that reflect the status quo but clarify how the current rules apply
Provides flexible and adaptive regulation	0	+	+
Rules that are clear and easier to understand and apply	0	+	+
Maritime safety is maintained or enhanced	0	++	+
Changes are practical and economically viable	0	-	+
<b>Overall assessment</b>	<b>0</b>	<b>+</b>	<b>+</b>

**Key for qualitative judgements:**

- ++ Much better than doing nothing/the status quo/counterfactual
- + Better than doing nothing/the status quo/counterfactual
- 0 About the same as doing nothing/the status quo/counterfactual
- Worse than doing nothing/the status quo/counterfactual
- Much worse than doing nothing/the status quo/counterfactual

## Radio Equipment Proposal Summary

<b>Preferred option</b>
Option 3 (new rules that reflect the status quo but clarify how the current rules apply) is the preferred option. It improves clarity, is straightforward to apply and balances benefits and costs.
<b>What are the marginal costs and benefits of the preferred option?</b>
This proposal would improve the usability of the radio rules by clarifying that a ship-earth station is required for specified vessels that proceed in the unlimited area. It should not impose costs.

**Table 9: Marginal costs and benefits of proposal to clarify ship-earth station requirements for vessels that proceed beyond offshore limits**

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional costs of the preferred option compared to taking no action</b>			
Owners and operators of vessel that proceed beyond offshore limits	No additional costs.	Low Not a major issue.	High
<b>Additional benefits of the preferred option compared to taking no action</b>			
Operators; surveyors; Maritime NZ staff	Rules are clear and therefore easier to apply.	Low Reduced transaction costs.	High

**Question:**

R 4.1 Do you agree with the proposal to clarify the rules for when a vessel must carry a mobile satellite ship-earth station?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

## Proposal 5: Clarifying AIS-SART / Radar Transponder requirements for vessels that proceed beyond offshore limits

<p><b>What we are proposing</b></p>
<p>Under this proposal, the rules would clarify that all vessels that proceed beyond offshore limits need to carry an AIS-SART or a Radar Transponder that complies with Regulation 14 of Chapter IV of SOLAS.<sup>17</sup></p>
<p><b>Status quo</b></p>
<p>Fishing vessels that proceed beyond offshore limits must carry an AIS-SART or a Radar Transponder.</p> <p>Non-passenger vessels of less than 300 GT must carry an AIS-SART or a Radar Transponder if they undertake an international voyage.</p> <p>Vessels to which SOLAS applies must carry an AIS-SART or a Radar Transponder.</p>
<p><b>What is the problem / rationale for the change?</b></p>
<p>The current rules are clear regarding AIS-SART / radar transponder requirements for fishing vessels but are not clear for other vessels.</p> <p>The current rules appear to assume that a vessel that proceeds beyond the offshore limits must be on an international voyage and therefore SOLAS requirements will apply.</p> <ul style="list-style-type: none"> <li>- Fishing vessels are addressed separately because SOLAS does not apply.</li> <li>- SOLAS radio requirements apply to cargo vessels of 300 GT or more, and all passenger vessels (a vessel that carries more than 12 passengers is a SOLAS 'passenger ship').</li> <li>- Non-passenger vessels (or 'cargo ships') of less than 300 GT are not addressed by SOLAS and therefore the current rules include requirements for these vessels to carry an AIS-SART / radar transponder.</li> </ul> <p>The reader of the rules is expected to understand that this approach covers all vessel types operating beyond offshore limits. However, the reform project aims to clarify and simplify the rules, and in this respect the current approach presents several issues.</p> <ul style="list-style-type: none"> <li>- Operators and readers of rules may not understand that SOLAS radio requirements apply if their vessel is more than 300 GT or carries more than 12 passengers.</li> </ul>

<sup>17</sup> Regulation 14 requires compliance with Resolution MSC.246(83) for AIS-SART and Resolution MSC.510(105) for radar transponders.

- An initial look at the records for vessels certified to operate beyond the offshore limits suggests that some vessels may not meet SOLAS radio requirements.<sup>18</sup> This suggests that the current rules are not clear and may not be generally understood.
- Certificates of survey issued for vessels certified to operate beyond offshore limits do not typically record whether the vessel travels internationally. Operating limits are described in terms of Part 20 Operating Limits, which defines offshore limits but does not define an international voyage.

**Impact of the proposed change**

This proposal is a clarification and should not impact existing vessels. However, it is possible that some vessels operating beyond the offshore limits may not be carrying an AIS-SART or radar transponder when they should do so. The proposed clarification would increase safety for these vessels at a cost starting from around \$1,300.

**Options analysis**

Two options were considered:

Option 1: (Status quo). Reproduce the current rules.

Option 2: (Preferred option). New rules that reflect the current rules but clarify how they apply.

**How do the options compare against the status quo**

The following criteria have been used to assess the alternative option. Refer to Table 10 for an assessment against these criteria.

<i>The changes provide flexible and adaptive regulation:</i>	Option 2 meets this criterion. Requirements are specified in the MTI and could be revised in response to industry changes.
<i>Rules are clear and easier to understand and apply:</i>	Option 2 meets this criterion. It would remove confusion by clearly stating when a vessel needs to carry an AIS-SART / radar transponder.
<i>Maritime safety is maintained or enhanced:</i>	Option 2 should maintain current levels of safety, as it would clarify current requirements. In practice Option 2 could enhance safety as some vessels may not be meeting the current requirements.
<i>Changes are practical and economically viable:</i>	Option 2 is very straightforward to implement. Both an AIS-SART and a radar transponder are small, easily stowed and are designed to be straightforward to activate. A vessel that proceeds beyond the offshore limit should already carry an AIS-SART or a radar transponder. Both devices cost from around \$1,300.

<sup>18</sup> Maritime NZ data shows that 14 vessels (that are not fishing vessels) are certified to operate beyond offshore limits – 1 passenger sailing vessel; 2 sailing waka; and 11 vessels classed as non-passenger ranging from 23 to 49 metres in length overall. Information for 5 of these vessels was viewed.

**Table 10: Comparing options against the status quo. Clarifying AIS-SART / Radar Transponder requirements for vessels that proceed beyond offshore limits**

	1. Status Quo	2: New rules that reflect the current rules but clarify how they apply.
Provides flexible and adaptive regulation	0	+
Rules that are clear and easier to understand and apply	0	+
Maritime safety is maintained or enhanced	0	0
Changes are practical and economically viable	0	+
<b>Overall assessment</b>	<b>0</b>	<b>+</b>

**Key for qualitative judgements:**

- ++ Much better than doing nothing/the status quo/counterfactual
- + Better than doing nothing/the status quo/counterfactual
- 0 About the same as doing nothing/the status quo/counterfactual
- Worse than doing nothing/the status quo/counterfactual
- Much worse than doing nothing/the status quo/counterfactual

<b>Preferred option</b>
Option 2 (New rules that reflect the current rules but clarify how they apply) is the preferred option. It improves clarity and is better than the status quo.
<b>What are the marginal costs and benefits of the preferred option?</b>
This proposal would improve the usability of the radio rules by clarifying that an AIS-SART or a radar transponder is required for vessels that proceed in the unlimited area. It should not impose costs.

**Table 11: Marginal costs and benefits of clarifying AIS-SART / Radar Transponder requirements for vessels that proceed beyond offshore limits**

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional costs of the preferred option compared to taking no action</b>			
Vessel operators	No additional costs in theory, although some vessel may not meet current requirements.	Low Not known to be a significant issue. Some vessels may incur costs of \$1,300 to comply.	High
<b>Additional benefits of the preferred option compared to taking no action</b>			
Vessel operators; surveyors; Maritime NZ staff	Rules are clear and therefore easier to apply	Low Reduced transaction costs.	Low
Persons on board vessels that operate beyond offshore limits	Safety would be maintained (or enhanced if vessels do not currently comply)	Medium Numbers of vessels impacted are small, but the impact could save lives.	Medium Vessel numbers are reliable. There is some uncertainty about the extent to which vessels currently comply.

**Question:**

R 5.1 Do you agree with the proposal to clarify the rules for when a vessel must carry an AIS-SART or a radar transponder?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

## How to have your say

The deadline for providing comment on these proposals is **5pm on Friday 11 July 2025**.

24. This document is part of a package of documents on the proposed changes to the design, construction and equipment rules. Information on this consultation will be available on Maritime NZ's website and through Maritime NZ's SeaChange newsletter.
25. Subject to interest, Maritime NZ will hold online information sessions on the proposals during the weeks of **3 to 6 June and 23 to 27 June**. Please contact us at the email address provided below if you would like to attend a session or if you would like us to contact you to discuss any of the proposals.
26. We welcome any feedback you would like to provide. Submissions can be made by completing the submission form on our website (<https://www.maritimenz.govt.nz/public/consultation/DCE-40-series-package-2/>), or in any other written form; and:
  - emailed to us at [40.series@maritimenz.govt.nz](mailto:40.series@maritimenz.govt.nz); or
  - posted to the Regulatory Reform Projects Team, Maritime NZ, PO Box 25620, Wellington 6140.
27. This document includes questions to help you focus your feedback. Answering the questions is optional.

### Submissions are public information

28. Please let us know if your comments are commercially sensitive or if for some reason you consider they should not be disclosed. If your submission is subject to an Official Information Act (OIA) request, Maritime NZ will consider your confidentiality request in accordance with the grounds for withholding information set out in the OIA.
29. In addition, if you are an individual (that is your comments are made personally and not on behalf of a company or an organisation), please let us know if you have reasons that your identity should not be disclosed.
30. We will acknowledge all submissions that we receive.

## Questions

31. The following questions have been included to help focus your feedback. Answering the questions is optional. All feedback is welcome.

### **Proposal 1: On some passenger vessels the master would need to carry a means of communication.**

R 1.1 Do you agree that the master of every passenger and sailing vessel of less than 12 metres in length that does not proceed beyond the inshore limit should carry a means of communication (cell phone, portable VHF radio or PLB) on their person?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

### **Proposal 2: More vessels would need to carry an EPIRB, and all EPIRBs would need to meet new performance specifications**

R 2.1 Do you agree that more vessels in the fleet should carry an EPIRB?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

R 2.2 Should smaller vessels and vessels where it is impractical to carry a float-free EPIRB be allowed to carry a manually activated EPIRB?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

### **Proposal 3: Radio equipment requirements for dive boats and fishing boats operating under a safe operating plan (SOP) would align with the requirements for other vessels.**

R 3.1 Do you agree that SOP dive boats and SOP fishing boats should meet the same radio communication requirements as other vessels of the same size and type operating in the same area

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

### **Proposal 4: Clarifying mobile satellite ship-earth station requirements for vessels that proceed beyond offshore limits**

R 4.1 Do you agree with the proposal to clarify the rules for when a vessel must carry a mobile satellite ship-earth station?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment]*

Why/why not?

**Proposal 5: Clarifying AIS-SART / Radar Transponder requirements for vessels that proceed beyond offshore limits**

R 5.1 Do you agree with the proposal to clarify the rules for when a vessel must carry an AIS-SART or a radar transponder?

*[Answers: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree; No comment*

*Why/why not?]*

## Appendix 1: ‘Snapshot’ of the proposed Radio Rule changes

Main changes	What would change	How the proposal would apply	Rule reference
<b>The master would need to carry a means of communication</b>	<p>The master would need to carry:</p> <ul style="list-style-type: none"> <li>• a cellular phone - if the vessel operates within cell phone coverage; <u>or</u></li> <li>• a hand-held (i.e. portable) VHF radio - if the vessel operates in an area where the hand-held radio has sufficient range to make a call on channel 16; <u>or</u></li> <li>• a personal locator beacon (PLB).</li> </ul>	<p>Would apply to new and existing passenger and sailing vessels of less than 12m in length that operate within restricted limits.</p> <p>Would apply when the new rules take effect.</p>	<p>Rule C2.2(1) MTI 2.2</p>
<b>More vessels would need to carry an EPIRB</b>	<p>An EPIRB would need to be float-free unless an exception applies. The following vessels would be allowed to carry a manually activated EPIRB:</p> <ul style="list-style-type: none"> <li>• Vessels of less than 12m in length operating in restricted limits</li> <li>• Fishing and dive boats operating under a safe operating plan (SOP)</li> <li>• Vessels operating in inshore limits that do not have a suitable space for an EPIRB hydrostatic release unit.</li> </ul>	<p>Would apply to all vessels except vessels of 6m or less that do not operate beyond enclosed water limits.</p> <p>Would apply when the new rules take effect.</p>	<p>Rule C2.2(1) MTI 2.2 MTI 3.2</p>
<b>EPIRBs would need to meet new performance specifications</b>	<p>All EPIRBs would need to operate on 406 MHz, be GNSS enabled and have AIS capability.</p>	<p>Would apply to <u>all</u> new and existing vessels.</p> <p>Existing vessels would have five years to meet the requirements.</p>	<p>Rule C2.2(1) MTI 2.2 MTI 3.2</p>
<b>SOP Dive boats and Fishing boats would not have separate rules</b>	<p>Radio Equipment requirements for dive boats and fishing boats that operate under a SOP would be the same as for any other vessels of the same size and type operating in the same area.</p>	<p>Would apply to <u>all</u> new and existing SOP dive boats and SOP fishing boats when rules take effect.</p>	<p>Rule C2.2(1) MTI 2.2</p>

Information on the locations and boundaries of operating limits can be found in Part 20 of the Maritime Rules, available on the Maritime NZ website.