



# Biofouling on Vessels Arriving to New Zealand

CRMS-BIOFOUL

15 November 2018

## **TITLE**

Craft Risk Management Standard: Biofouling on Vessels Arriving to New Zealand

## **COMMENCEMENT**

This Craft Risk Management Standard comes into force on 15 November 2018

## **ISSUING AUTHORITY**

This Craft Risk Management Standard is issued under section 24G of the Biosecurity Act 1993.

Dated at Wellington this 15<sup>th</sup> day of November 2018.

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Ministry for Primary Industries  
(acting under delegated authority of the Director-General)

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## Introduction

This introduction is not part of the Craft Risk Management Standard, but is intended to indicate its general effect.

## Purpose

This Craft Risk Management Standard (CRMS) specifies the requirements for management of biofouling risk associated with vessels (sea craft) that are entering New Zealand territorial waters.

## Background

Vessel biofouling is a major pathway for the introduction of non-indigenous marine species into New Zealand's territorial waters, some of which may be harmful to New Zealand's resources, economy, environment, and/or people's health and well-being. This CRMS manages the risk of introduction into New Zealand's territorial waters of non-indigenous species associated with arriving vessels.

## Who should read this Craft Risk Management Standard?

Operators and persons in charge of either vessels based in New Zealand, which voyage in and out of the country, or vessels originating from outside and arriving into New Zealand territorial waters as occasional or regular visitors.

## Why is this important?

An operator or the person in charge of a vessel, must take all reasonable steps to comply with this standard. Any vessel that does not meet the requirements of this standard is likely be directed under section 32 or 33 of the Biosecurity Act 1993 (the Act) to take action to mitigate the risk and, if mitigation measures cannot be taken, is likely to be directed to leave New Zealand.

Deliberate non-compliance with the requirements of this standard or negligence leading to non-compliance may lead to increased intervention regimes (e.g. inspections or audits).

## Other information

A guidance document giving information needed for complying with this standard is available on the MPI website: [Guidance Document for the Craft Risk Management Standard for Biofouling](#).

An operator or person in charge of a vessel may submit, for MPI approval, a Craft Risk Management Plan under section 24K of the Act as an alternative to meeting the requirements of the CRMS. Under the Act, such a plan must contain requirements that are equivalent to but different from those specified in the CRMS.

## Part 1: Preliminary Provisions

### 1.1 Application

- (1) This standard applies to the operator or person in charge<sup>1</sup> of any vessel that will anchor, berth or be brought ashore in New Zealand after a voyage originating outside New Zealand's territorial waters. It does not apply where a vessel has not entered the territorial waters of another country ever or since it was last verified as compliant<sup>2</sup>.
- (2) This standard applies to the risk of the introduction into New Zealand of non-indigenous species carried as biofouling on the submerged or periodically submerged parts of the hull.

### 1.2 The outcome this Craft Risk Management Standard is seeking to achieve

- (1) The outcome of this standard is to minimise the entry into New Zealand of those non-indigenous species that constitute vessel biofouling<sup>3</sup> or are harboured in the biofouling<sup>4</sup>.

### 1.3 Incorporation of material by reference

- (1) The following documents are incorporated by reference:
  - a) IMO guidelines, the 2011 Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (Resolution MEPC.207(62)), adopted on 15 July 2011, or updates of these guidelines.
  - b) Approved Biosecurity Treatments MPI-STD-ABTRT, the current version at time of reference
- (2) Under section 142O(3) of the Biosecurity Act, it is declared that section 142O(1) does not apply. That is, a notice under section 142O(2) of the Act is not required to be published before material, that amends or replaces any material incorporated by reference, has legal effect as part of the documents in (1) above.

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<sup>1</sup> Any specific component of meeting the Requirements is expected to be carried out by an operator or person in charge of the vessel – in particular, whoever has this type of activity as part of their normal duties or responsibilities in respect to the vessel

<sup>2</sup> Means verified by an MPI-approved provider following inspection of the hull

<sup>3</sup> Such as algae, barnacles, mussels and oysters

<sup>4</sup> Such as free living worms, sea-stars, fish or shrimps

## Part 2: Requirements

### 2.1 'Clean Hull' requirement

- (1) A vessel must arrive in New Zealand<sup>5</sup> with a 'clean hull'.
- (2) A hull is considered to be a 'clean hull' when no biofouling of live organisms is present other than that within the thresholds in Appendix 2.

### 2.2 Acceptable measures for meeting the standard

- (1) One of the following measures must be applied to meet the 'Clean Hull' requirement:
  - a) Cleaning before visit to New Zealand, (or immediately on arrival in a facility or by a system, approved<sup>6</sup> by MPI). All biofouling must be removed from all parts of the hull and this must be carried out less than 30 days before arrival to New Zealand or within 24 hours after time of arrival.
  - b) Continual Maintenance using best practice, including: application of appropriate antifouling coatings; operation of marine growth prevention systems on sea-chests; and in-water inspections with biofouling removal as required.
  - c) Application of Approved Treatments<sup>7</sup>. Treatments are approved and listed under the Approved Biosecurity Treatments MPI-STD- ABTRT.

**Guidance**

Following the IMO Biofouling Guidelines<sup>8</sup> is recognised as an example of best practice

**Guidance**

As an alternative to the acceptable measures above, an operator or person in charge of a vessel may submit, for MPI approval, a Craft Risk Management Plan under section 24K of the Act (which includes steps that will be taken to reduce risk to the equivalent degree as meeting the requirements of this standard)

### 2.3 Information requirements

- (1) Prior to arriving in New Zealand all operators or persons in charge of vessels must provide to MPI the following information:
  - a) Intended length of stay within New Zealand territorial waters and intentions in respect of places to be visited
  - b) Whether the vessel has spent any extended periods mainly stationary in a single location

<sup>5</sup> Arrive in New Zealand, in relation to a vessel, means to anchor, berth, or come ashore in New Zealand territorial waters after a voyage originating outside New Zealand territorial waters.

<sup>6</sup> Means approved as a transitional facility under section 39 of the Act

<sup>7</sup> 'Approved Treatment' includes any treatment for meeting the outcome of standard that has received MPI approval and is listed on the MPI website.

<sup>8</sup> The current version, including templates for biofouling management plans and records, can be read here.

<http://www.imo.org/en/OurWork/Environment/Biofouling/Documents/RESOLUTION%20MEPC.207%5b62%5d.pdf>

- c) If the vessel is coming in to undergo biofouling cleaning on arrival, any formal arrangement for cleaning or treatment and whether they will be undertaken immediately upon arrival (within 24 hours)
  - d) What measures have been or will be used to meet the requirements of the standard, or
  - e) Whether the operator or person in charge has chosen to operate an MPI-approved Craft Risk Management Plan as an alternative to meeting the requirements of the standard.
- (2) The following information (if relevant) must be held on the vessel and provided to MPI in an appropriate form if requested (this is in addition to information to be provided prior to arrival).
- a) Information on the antifouling regime and any marine growth prevention systems used
  - b) Whether applying the IMO Biofouling Guidelines, including employing a biofouling management plan showing the hull maintenance and inspection regime and records of biofouling management kept, preferably consistent with the template in the IMO guidelines
  - c) If applicable to the vessel, its latest International Antifouling System Certificate or International Antifouling System Declaration
  - d) Date and reporting from the latest hull biofouling inspection (undertaken either on land or in-water) that was initiated by the operator or person in charge of the vessel.

**Guidance**

Guidance on appropriate forms of documentation can be found on the MPI [website](#).

## Appendix 1: Definitions

The following terms and definitions apply to this standard. Other terms used are as per the Act.

### **algal growth**

Growth of algae that is visible to the naked eye. Algae may be either single-celled filamentous forms or multi-celled macroalgae (seaweed) species and includes coralline algae.

### **biofouling**

The accumulation of aquatic organisms such as micro-organisms, plants and animals on surfaces and structures immersed in or exposed to the aquatic environment.

### **goose barnacles**

Also called stalked barnacles or gooseneck barnacles, goose barnacles are ubiquitous foulers of tropical, subtropical and temperate seas, with a wide oceanic distribution that includes attachment to drift wood, floating plant debris and vessel hulls, as well as turtles and whales.

### **hull**

The immersed (including occasionally immersed) surfaces of a vessel including the following three parts. The definition of hull includes pontoons.

- **hull area**  
The immersed surfaces of a vessel excluding niche areas and wind/water line.
- **niche areas**  
Areas on a vessel hull that are more susceptible to biofouling due to different hydrodynamic forces, susceptibility to coating system wear or damage, or being inadequately, or not, painted, e.g., sea chests, bow thrusters, propeller shafts, inlet gratings, dry-dock support strips, etc. Includes appendages.
- **wind and water line**  
The area of the hull that is subject to alternating immersion due to a vessel's movement or loading conditions (also known in shipping as the boot-top).

### **IMO**

International Maritime Organisation

### **New Zealand's territorial waters**

The territorial sea and the internal waters which together comprise the sea surrounding New Zealand out to 12 nautical miles from an internal baseline as described in the Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977.

### **non-indigenous species**

Those organisms which are not native to New Zealand.

### **slime layer**

A layer of microscopic organisms, such as bacteria and diatoms, and the slimy substances that they produce.

### **vessel or sea-craft**

Is a subset of 'craft' as defined by the Act and means every description of boat or other craft used in water navigation, whether or not it has any means of propulsion. Also includes: a barge, lighter, hovercraft or floating drilling rig. It does not include aircraft.



## Appendix 2: “Clean Hull” Thresholds

- (1) The following criteria are used in assessing whether a vessel has a ‘clean hull’ according to vessel category. There are two different vessel categories and applicable biofouling thresholds. These are for a) long-stay vessels and b) short-stay vessels and are explained below. The meaning of “hull” (including various parts mentioned in Tables 1 and 2) is given in Definitions (Appendix 1).
- a) **‘Long-stay vessels’** means those vessels intending to remain in New Zealand for 21 days or longer, or those vessels intending to visit areas other than those designated under section 37 of the Act as ‘Places of First Arrival’.

**Table 1: Biofouling Threshold for Long-Stay Vessels**

Hull part	Allowable biofouling
All hull surfaces	Slime layer; Goose barnacles

- b) **‘Short-stay vessels’** means those vessels intending to remain in New Zealand for 20 days or less and to only visit places designated under section 37 of the Act as ‘Places of First Arrival’. These vessels generally remain under ‘biosecurity surveillance’ while in New Zealand territorial waters rather than becoming fully cleared of risk goods.

**Table 2: Biofouling Threshold for Short-Stay Vessels**

Hull part	Allowable biofouling
All hull surfaces	Slime layer; Goose barnacles.
Wind and water line	Green algae growth of unrestricted cover and no more than 50 mm in frond, filament or beard length;  Brown and red algal growth of no more than 4 mm in length;  Incidental (maximum of 1%) coverage of one organism type of either tubeworms, bryozoans or barnacles, occurring as: <ul style="list-style-type: none"> <li>• isolated individuals or small clusters; and</li> <li>• a single species, or what appears to be the same species.</li> </ul>
Hull area	Algal growth occurring as: <ul style="list-style-type: none"> <li>• no more than 4 mm in length; and</li> <li>• continuous strips and/or patches of no more than 50 mm in width.</li> </ul> Incidental (maximum of 1%) coverage of one organism type of either tubeworms, bryozoans or barnacles, occurring as: <ul style="list-style-type: none"> <li>• isolated individuals or small clusters that have no algal overgrowth; and</li> <li>• a single species, or what appears to be the same species.</li> </ul>
Niche areas	Algal growth occurring as: <ul style="list-style-type: none"> <li>• no more than 4 mm in length; and</li> <li>• continuous strips and/or patches of no more than 50 mm in width.</li> </ul> Scattered (maximum of 5%) coverage of one organism type of either tubeworms, bryozoans or barnacles, occurring as: <ul style="list-style-type: none"> <li>• widely spaced individuals and/or infrequent, patchy clusters that have no algal overgrowth; and</li> <li>• a single species, or what appears to be the same species; and</li> </ul>

Hull part	Allowable biofouling
	<p>Incidental (maximum of 1%) coverage of a second organism type of either tubeworms, bryozoans or barnacles, occurring as:</p> <ul style="list-style-type: none"><li>• isolated individuals or small clusters that have no algal overgrowth; and</li><li>• a single species, or what appears to be the same species.</li></ul>