



# THE CRAFT RISK MANAGEMENT STANDARD FOR BIOFOULING: FREQUENTLY ASKED QUESTIONS

## What is the Craft Risk Management Standard (CRMS) for vessel biofouling?

The CRMS is a requirement for all vessels arriving into New Zealand. It was introduced to manage the biosecurity risks associated with vessel biofouling. The standard aims to reduce vessel biofouling by requiring vessels to take preventative measures and maintain a clean hull before they arrive into New Zealand.

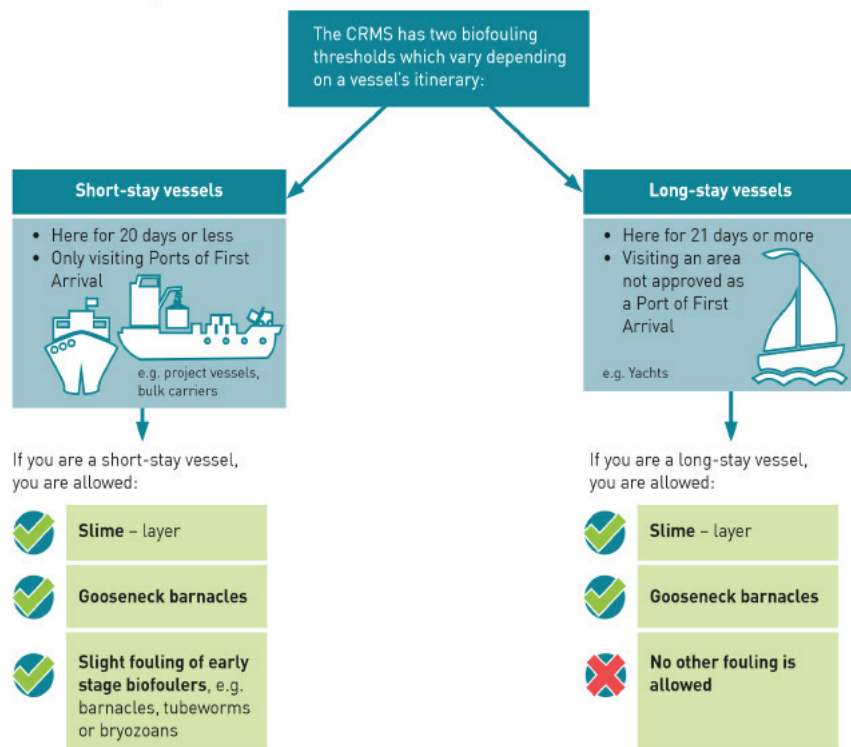
## Why is biofouling “bad”?

Biofouling carries marine species that are extremely tough and resilient. Around 87 percent of non-indigenous marine species in New Zealand are associated with biofouling on international vessels. These introductions threaten the marine environment and its economic, environmental, social and cultural values.

## What is a clean hull, and why is it different for some vessels?

The definition of “clean hull” depends on the vessel’s itinerary. It sorts vessels into two categories – short stay vessels and long stay vessels.

**Under the CRMS, all vessels must arrive with a “clean” hull.**



**Short-stay vessels** are those staying in New Zealand for 20 days or less, and only visiting ports that are Places of First Arrival. Most short stay vessels are commercial trading vessels. MPI encourages short-stay vessels to meet biofouling thresholds by doing continual maintenance using best practice.

Short-stay vessels are allowed a slime layer and gooseneck barnacles, plus small amounts of other fouling organisms on their hull (<1% coverage) and niche areas (<5% coverage).

**Long-stay vessels** are those staying in New Zealand for 21 days or more, and/or that are visiting ports not designated as Places of First Arrival. MPI encourages long-stay vessels to meet the thresholds by cleaning/treating the vessel’s hull prior to arrival.

Long-stay vessels are only allowed a slime layer and gooseneck barnacles; no other fouling will be allowed on hull or niche areas.

## How do I meet the CRMS for vessel biofouling?

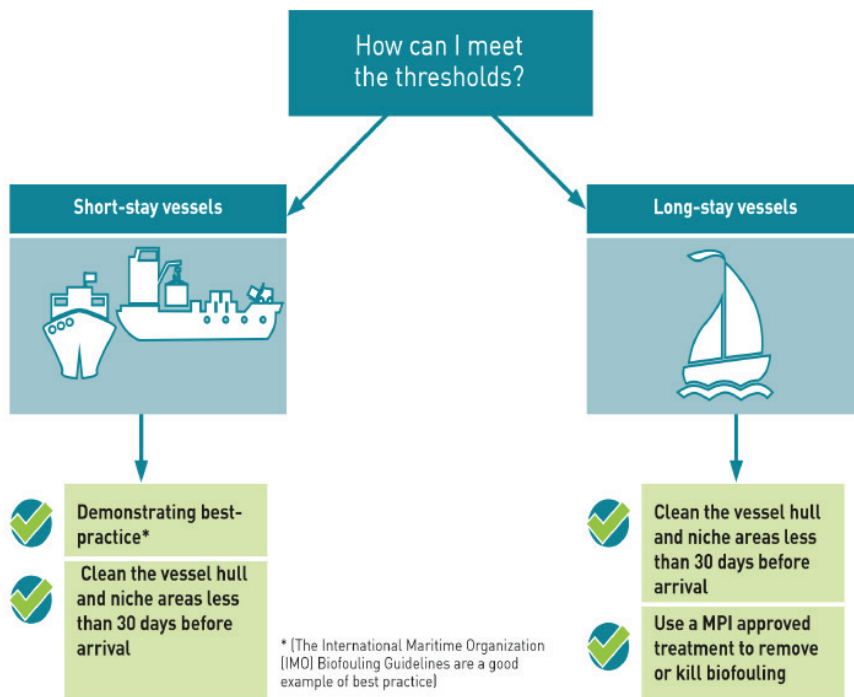
Compliance with the upcoming CRMS can be achieved in several ways, including:

- Cleaning the vessel hull less than 30 days before arrival in New Zealand or within 24 hours of arrival using an MPI-approved provider (you must have proof of a cleaning facility being booked within 24 hours of arrival) – **Recommended for long-stay vessels.**
- Doing continual maintenance using best practice – **Recommended for short-stay vessels.**
- Applying MPI-approved treatments to the hull.

Vessels that cannot meet the requirements using the methods outlined above may develop a Craft Risk Management Plan to be approved by MPI.

## What do I need to do to show compliance?

MPI wants the risk of biofouling to be managed offshore. This means we will be assessing compliance based on documentation and records that show you have done one of the three measures to meet the biofouling standard. The type of documentation we expect to see will depend on the measure used to meet the standard (i.e. best practice or cleaning before arrival).



Currently, approved options for managing biofouling in New Zealand are limited, as haul out/dry docking is the only approved treatment at the moment. This is only available for **smaller vessels**, as large dry docks do not exist in New Zealand.

Any biofouling management or costs due to delays for non-compliant vessels will be at the vessel's expense.

### What if I am unsure if my vessel will be compliant or need biofouling advice?

Contact MPI's biofouling advisers at [standards@mpi.govt.nz](mailto:standards@mpi.govt.nz) with any questions. The earlier you contact us the better, as there are more options for managing biofouling before the vessel departs for New Zealand. Once it is en-route, the options become limited.

To find out what records you should carry, depending on your vessel type, visit the following pages:

- **Commercial vessels**
- **Commercial fishing vessels**
- **Yachts and recreational vessels**
- **Work and project vessels**

### How will MPI assess whether a vessel meets the thresholds of the CRMS? Will MPI dive on every vessel?

MPI will assess compliance based on documentation sent to MPI prior to a vessel's arrival. MPI, and other organisations, have commissioned extensive research on risk indicators for biofouling, and have used this information to develop methods to assess the biosecurity risk of a vessel based on the vessel's records of biofouling maintenance, operating profile (i.e. whether it moves around often or sits in place for extended periods of time), and records of antifouling paint application, among others. Only vessels that cannot provide evidence they meet the standard may be subject to a dive inspection.

### What happens if my vessel is found non-compliant with the CRMS?

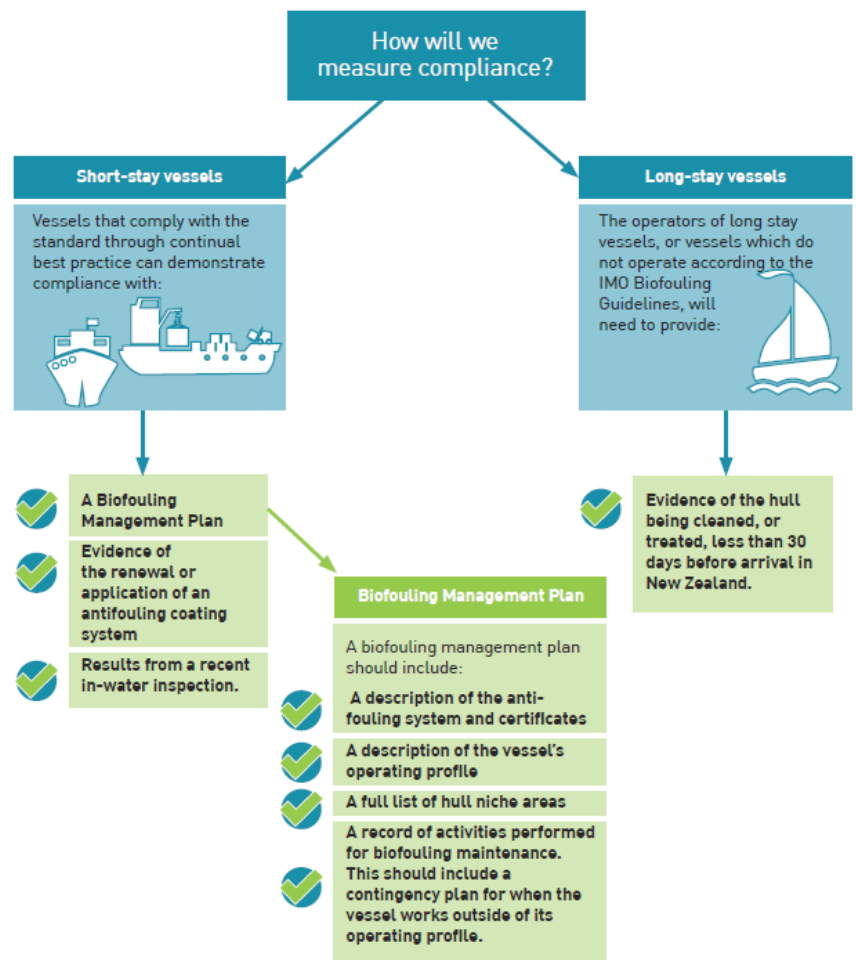
If vessels are suspected to exceed the fouling thresholds upon receipt of initial documentation, MPI will first request further proof of biofouling management.

Vessels that cannot prove they are compliant with the standard may be subject to a dive inspection in New Zealand.

If vessels are found non-compliant they will be directed to either manage the biosecurity risk or to leave New Zealand.

### What are Places of First Arrival?

A port approved under the Biosecurity Act to receive craft from outside New Zealand. A list of all ports currently approved as places of first arrival in New Zealand for seacraft can be found on the [MPI website](#).



## What is a Craft Risk Management Plan (CRMP)?

When a vessel operator cannot meet the CRMS Biofouling requirements by one of the three required measures, they can develop a Craft Risk Management Plan (CRMP). These plans must achieve the desired effect of MPI's biofouling requirements (clean hull thresholds) but may use a different method to do so. The plan must outline the ways the risk will be managed. The operator or person in charge of the vessel or fleet can submit a CRMP to MPI for consideration of approval.

## What types of vessels might need a CRMP?

MPI expects that cruise vessels, project vessels and some fishing vessels would be the main types of vessels that would require a CRMP. This is because of the unique operating profile some of these vessels may have, or because they may be domestic vessels. Guidance, and how to apply for a CRMP, can be found [here](#).

## My vessel is a commercial vessel (container, bulk, tanker, etc), what measure should I use to meet the CRMS?

Doing continual biofouling maintenance according to best practice, as outlined in the IMO guidelines (recommended for short-stay vessels). See below for more information regarding what is best practice maintenance.

## My vessel is a passenger vessel, what measure should I use to meet the CRMS?

Most cruise vessels visit places that are not ports, so they are "long-stay vessels." Due to the schedules of many cruise vessels, cleaning before arrival may not be an option prior to every entry into New Zealand. In order for cruise vessels to meet the long-stay threshold of the CRMS, MPI suggests cruise vessels comply by creating a **Craft Risk Management Plan**.

## My vessel is a fishing vessel, what measure should I use to meet the CRMS?

Continual maintenance using best practice should underpin every vessel's maintenance plan. However, fishing vessels brought from overseas to work or be permanently based here will likely need to be hauled out, cleaned and/or re-antifouled before arrival. Carry evidence this has been done.

Domestic fishing vessels might want to submit a **Craft Risk Management Plan** to MPI for approval.

Fishing vessels being **brought from overseas to work or be based in New Zealand** are recommended to meet the standard by cleaning the entire vessel within 30 days before arrival. Carry evidence this has been done.

Fishing vessels coming for refit, repair, or biofouling removal need to provide evidence of a booking within 24 hours of arrival. Biofouling removal must be done at an MPI-approved **Transitional Facility**. See below for information about Transitional Facilities.

## My vessel is a work boat (i.e. tug/dredge/barge/resource vessel), what measures should I use to meet the CRMS?

Continual maintenance using best practice should underpin every vessel's maintenance plan. However, tugs, barges and resource support vessels brought from overseas to work or be permanently based here, or vessels that have spent periods idle, will likely need to be hauled out, cleaned and/or re-antifouled 30 days before arrival. Carry evidence this has been done.

## What is a Transitional Facility?

If you are importing goods, or bringing a craft to New Zealand for treatment, they need to go first through a transitional or containment facility and may need to be quarantined.

Transitional facilities are approved by MPI to receive craft, containers and goods that may pose a biosecurity risk. Goods or containers may need to be inspected or treated at the facility before they can be "cleared" for entry into New Zealand.

Every transitional facility has to have an MPI-approved transitional facility operator and, if receiving containers, an accredited person available (who may also be the operator) who has been approved by MPI.

Transitional facilities can hold, inspect, treat, identify, or destroy and dispose of uncleared risk goods.

## My vessel is a yacht, what measures should I use to meet the CRMS?

Continual maintenance using best practice should underpin every vessel's maintenance plan. However, yachts arriving from overseas will likely need to be hauled out, cleaned and/or re-antifouled 30 days before arrival. Carry evidence this has been done.

## My vessel is a research vessel, cable ship or "one-off" vessel, what measures should I use to meet the CRMS?

Continual maintenance using best practice should underpin every vessel's maintenance plan. However, research vessels often sit for long periods of time before working on a project. In some cases they may need to be cleaned and inspected before arrival into New Zealand. This is particularly important for research vessels as they are often coming to high value areas, such as our offshore islands, or for long periods of time. Carry evidence this has been done.

## My vessel is a navy vessel, what measures should I use to meet the CRMS?

Continual maintenance using best practice should underpin every vessel's maintenance plan. However, navy vessels often sit for long periods of time before going to work on a project. In some cases they may need to be cleaned and/or inspected before arrival into New Zealand. This is particularly important for navy vessels as they are often coming to high value areas, such as our offshore islands, or for long periods of time. Carry evidence this has been done.



## My vessel is an oil & gas resource vessel, what measures should I use to meet the CRMS?

Oil rigs, and their support vessels are normally coming to New Zealand for long periods of time. They will likely need to be dry docked, completely cleaned and/or re-antifouled 30 days before arrival. It helps to engage with MPI before you depart to check that everything has been done to comply (and to avoid unnecessary costs). Contact MPI at [standards@govt.nz](mailto:standards@govt.nz)

## What is continual maintenance using best practice?

Continual maintenance involves ongoing management of biofouling, including:

- Applying antifouling coatings to the hull and niche areas of your vessel. It is important to choose a paint that matches the operational profile of your vessel.
- Monitoring the performance of your vessel and performing in-water inspections and cleaning when performance begins to decline.
- Operating within the specifications of the antifouling system coating.
- Proactive grooming of the slime layer. Cleaning the slime layer often will prevent larger organisms from settling and will allow the antifouling paint to be more effective.
- Having **contingency plans** (such as in-water inspections and in-water cleaning) for when your vessel falls out of its operational profile or the paint is damaged (repairs should be done if the antifouling system is damaged, even if it is minor).
- Renewing antifouling coatings within the specified service life.
- Treating pipework and sea chests or using Marine Growth Prevention Systems to minimise biofouling growth.

Carry records of how your vessel has been maintained by developing a Biofouling Management Plan (BFMP) that details the procedures for managing biofouling for that vessel. It is also important to maintaining a Biofouling Record Book (BFRB), that logs all biofouling maintenance activities undertaken by the vessel.

## What are “contingency plans”?

Operators should have contingency plans in place for instances when a vessel operates outside its usual profile, or is subject to failures or damage to antifouling systems. Contingency plans may include more frequent biofouling surveys, system repair, proactive in-water cleaning or application of reactive treatment to sea chests and internal pipework. In-water repair should be applied where antifouling system damage has occurred, even if the area of damage is relatively minor.

## What are vessel niche areas?

Niche areas are the parts of a vessel that are more likely to accumulate biofouling. They include, but are not limited to the following:

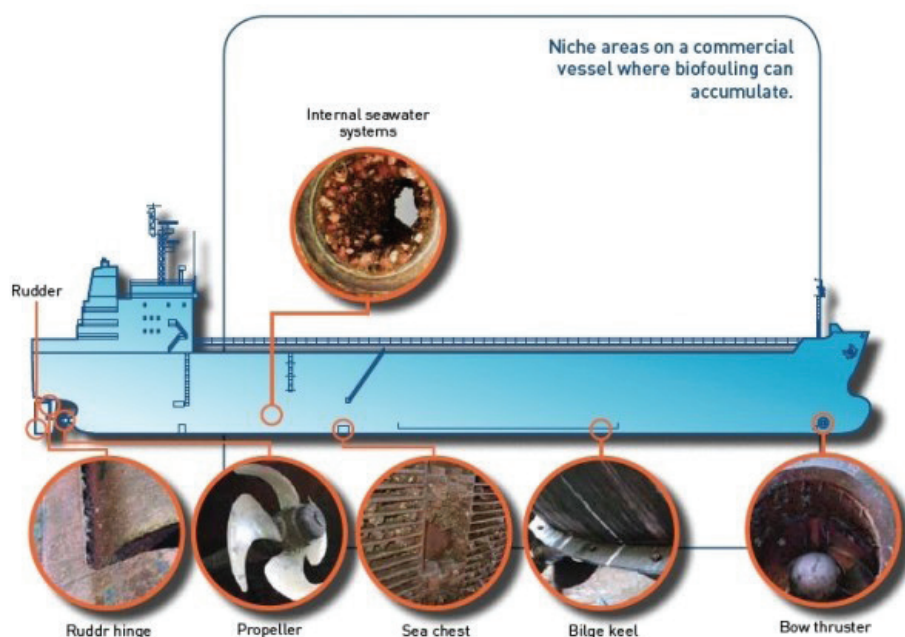
- keel, bilge keels, skegs;
- seawater inlets, sea chests, seawater outlets;
- sacrificial anodes/impressed current blocks and earthing plates;
- echo sounder transducers, speed log fairings;
- propulsion units: propellers, propeller shaft/azimuth centre, propeller blades, propeller boss, bow/stern thrusters;
- rudder, rudder stock, rudder post;
- anchors, chains, and lockers;
- internal sea water systems and bilge spaces: strainers and pipework for engines, generators, fire main, deck services.

## What makes a good Biofouling Management Plan (BFMP)?

A good BFMP is specific to your vessel, and details specific management activities for all hull and niche areas present on the vessel (including frequency of management activities). It should also include contingencies for if/when the vessel falls out of its operational profile (i.e. if it doesn't follow its normal schedule/operating speed/route).

The most important part of a BFMP is a Biofouling Record Book (BFRB) that details all of the biofouling management actions undertaken by the vessel. This includes any cleaning, inspection, treatment, dry docking, antifouling, etc. These types of records are the most useful for proving compliance to MPI.

A BFMP template can be found [here](#)

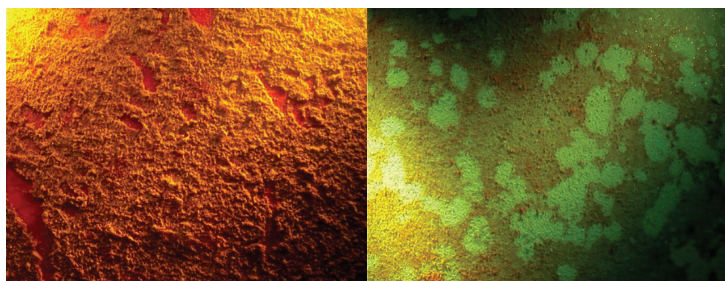


## How can I tell if my vessel is fouled?

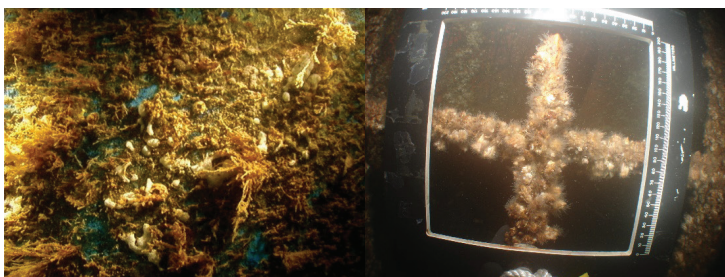
You can monitor your vessel's performance to see if it is fouled. It's important to remember that niche areas don't affect speed as much as the flat surfaces, so you should regularly inspect these to check they haven't become fouled.

Vessel performance changes that may indicate the presence of fouling include:

- reduced speed (e.g., 1 knot) with shaft revolutions per minute (r/min) set for standard speed;
- increased fuel consumption (> 5 %) to maintain a specified shaft r/min (such as for standard speed), with propulsion and auxiliary machinery at optimum efficiency;
- >5 % increase in shaft r/min to maintain a given speed;
- an increase in pressure required for the main turbine first stage shell to maintain a given shaft r/min (for steam-propelled vessels, assuming a constant main condenser vacuum and main steam supply pressure and temperature);
- an increase in torque at a given shaft r/min (for vessels equipped with main shaft torsion-meters).



Example of microfouling (slime layer)



Example of macrofouling (e.g. barnacles, bivalves, algae, tubeworms).

## What is in-water cleaning or treatment?

In-water cleaning and treatment are important tools for reducing the biosecurity risks during the in-service period of vessels. In-water cleaning or treatments can be applied proactively (preferred) or reactively.

### What is proactive in-water cleaning or treatment?

Proactive in-water cleaning or treatment is used to reduce the accumulation of microfouling (i.e. slime) on the vessel as part of a biofouling management programme. It is known as hull grooming and is considered best practice for ongoing hull maintenance.

Proactive in-water cleaning and treatment can manage biofouling at the slime layer stage to optimise vessel operational efficiency.

### What is reactive in-water cleaning or treatment?

Reactive in-water cleaning or treatment is used to remove or treat biofouling (i.e. macrofouling) from unmanaged or poorly maintained vessels, or areas where antifouling coatings have failed or become damaged. Macrofouling is more difficult to remove and may contain a diverse range of organisms that are reproductively mature.

Where operationally and economically practical, vessels should be dry-docked in preference to undergoing reactive in-water cleaning or treatment.

Reactive in-water cleaning or treatment should not be considered a replacement for vessel dry-docking. Reactive in-water cleaning can:

- release non-indigenous marine species freely into the marine environment, helping them establish;
- damage antifouling coating systems;
- shorten coating system service life;
- release biocides or other contaminants into the environment.

Depleted antifouling coating systems on hulls will also rapidly re-foul, increasing biosecurity risks and reducing vessel efficiency.

## Who do I need permission from to clean or treat a vessel in-water?

In-water cleaning or treatment methods are acceptable only if the contaminant discharges from the activity comply with the standards or requirements set by the relevant authority. Relevant authorities in New Zealand include MPI, Environmental Protection Authority, regional councils, port authorities and marina operators.

For biosecurity purposes, the in-water cleaning or treatment provider must be MPI-approved. It is likely that the provider would have the appropriate discharge consents to be able to operate in their home port or marina. Contact [standards@mpi.govt.nz](mailto:standards@mpi.govt.nz) to find out how to become approved.