
Control and Management of Ships' Biofouling

Notice to ship owners, managers, Masters, Approved Nautical Inspectors, Recognised Organisations and surveyors

This Notice supersedes BMA Information Bulletin No.171 Rev.2

1. Purpose

- 1.1. This Information Notice (IN) provides guidance on the control and management of ships' biofouling to minimise the transfer of invasive aquatic species.

2. Application

- 2.1. This IN applies to all ships.

3. Introduction

- 3.1. The International Maritime Organization (IMO) Marine Environment Protection Committee (MEPC) adopted Resolution [MEPC.207\(62\) 2011 Guidelines for the Control and Management of Ships' Biofouling to Minimise the Transfer of Invasive Aquatic Species](#)¹ in July 2011 to provide a globally consistent approach to the management of biofouling.
- 3.2. As noted in the introduction to MEPC.207(62), the potential for invasive aquatic species transferred through biofouling to cause harm has been recognised by the IMO, the Convention on Biological Diversity (CBD), several [United Nations Environment Programme \(UNEP\)](#) Regional Seas Conventions (e.g., Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution), the Asia Pacific Economic Cooperation forum (APEC), and the Secretariat of the Pacific Region Environmental Program (SPREP).
- 3.3. Studies have shown that biofouling can also be a significant vector for the transfer of invasive aquatic species. Biofouling on ships entering the waters of States may result in the establishment of invasive aquatic species which may pose threats to human, animal and plant life, economic and cultural activities and the aquatic environment.

¹ [http://www.imo.org/blast/blastDataHelper.asp?data_id=30766&filename=207\(62\).pdf](http://www.imo.org/blast/blastDataHelper.asp?data_id=30766&filename=207(62).pdf)

- 3.4. All ships have some degree of biofouling, even those which may have been recently cleaned or had a new application of an anti-fouling coating system. Studies have shown that the biofouling process begins within the first few hours of a ship's immersion in water. The biofouling that may be found on a ship is influenced by a range of factors, such as:
- i. design and construction, particularly the number, location and design of niche areas;
 - ii. specific operating profile, including factors such as operating speeds, ratio of time underway compared with time alongside, moored or at anchor, and where the ship is located when not in use (e.g., open anchorage or estuarine port);
 - iii. places visited and trading routes; and
 - iv. maintenance history, including: the type, age and condition of any anti-fouling coating system, installation and operation of anti-fouling systems and dry-docking/slipping and hull cleaning practices.
- 3.5. Implementing practices to control and manage biofouling can greatly assist in reducing the risk of the transfer of invasive aquatic species. Such management practices can also improve a ship's hydrodynamic performance and can be effective tools in enhancing energy efficiency and reducing air emissions from ships.
- 3.6. Whilst MEPC.207(62) is not mandatory, the Bahamas Maritime Authority (BMA) encourages Companies² operating ships registered in The Bahamas to familiarise themselves with the content of MEPC.207(62) and voluntarily apply the guidelines to their ships.

4. **Biofouling Record Book**

- 4.1. In order to record details of hull inspections and biofouling management measures undertaken on ships, the BMA has produced a Biofouling Record Book, in the format specified in MEPC.207(62).
- 4.2. The Biofouling Record Book is available to order from the BMA Publications section – see [BMA Information Bulletin No.152](#)³ for ordering details
- 4.3. Revision 0 of the Biofouling Record Book contains a typographical error on item 2.3 at the top of page 2. Item 2.3 should read *“When the hull area, fittings, niches and voids below the waterline have been inspected cleaned by divers...”*.

² The “Company” is the entity responsible for the management of the ship in accordance with the ISM Code. For ships to which the ISM Code is not applicable, the Company is the Managing Owner in accordance with Section 52 of the Bahamas Merchant Shipping Act

³ <http://www.bahamasmaritime.com/wp-content/uploads/2015/08/152-Publications-Rev2.pdf>

- 4.4. This typographical error will be corrected in future revisions of the Biofouling Record Book, but in the meantime, the BMA accepts that ships may continue to use Revision 0 of the Biofouling Record Book.

5. **Specific Regional Requirements**

- 5.1. Certain regions have specific requirements relating to the control of biofouling. There may be penalties for ships which are considered to have excessive biofouling or that do not comply with local requirements. Heavily fouled ships may be refused entry.

- 5.2. Companies operating ships in such regions should ensure that they comply with any specific regional requirements.

- 5.3. Where the BMA is aware of specific regional requirements, these are summarised below.

5.4. **AUSTRALIA**

- 5.4.1. Guidelines on biofouling management have been produced by the Australia Department of Agriculture and Water Resources and are available [here](#)⁴.

5.5. **NEW ZEALAND**

- 5.5.1. All vessels must provide evidence of biofouling management before they arrive in New Zealand.

- 5.5.2. The Craft Risk Management Standard (CRMS) for Biofouling outlines the requirements for international vessels. There are two vessel categories under the CRMS based on the length of the intended stay in New Zealand:

- i. Short-stay vessels – those staying in New Zealand for less than 21 days, and only visiting [approved places of first arrival](#)⁵.
- ii. Long-stay vessels – those staying 21 days or longer, or visiting areas not approved as places of first arrival.

- 5.5.3. Most short-stay vessels are commercial vessels, including:

- i. tankers
- ii. bulkers
- iii. container ships
- iv. commercial cargo vessels.

⁴ <https://www.marinepests.gov.au/sites/default/files/Documents/commercial-vessels-biofouling-guidelines.pdf>

⁵ <https://www.biosecurity.govt.nz/news-and-resources/resources/registers-and-lists/places-of-first-arrival-seaports/>

- 5.5.4. Long-stay vessels often include:
- i. yachts and other recreational vessels
 - ii. cruise vessels
 - iii. work and project vessels
 - iv. research vessels
 - v. defence vessels.
- 5.5.5. The biofouling requirements may be met by carrying out and keeping records of one of the following:
- i. Undertaking continual hull maintenance using best practices (recommended for short-stay vessels).
 - ii. Cleaning the hull and niche areas within 30 days before arrival in New Zealand (recommended for long-stay vessels).
- 5.5.6. Some commercial vessels, such as cruise vessels, may not be able to meet the requirements of the CRMS using one of the methods outlined in the standard. These vessels are encouraged to develop a [Craft Risk Management Plan \(CRMP\)](#)⁶ that outlines alternate but equivalent ways of managing biofouling.
- 5.5.7. If a vessel that is surveyed is found to be non-compliant, normal processes for non-compliant vessels will follow. Note this does not necessarily mean a vessel will be directed to leave New Zealand waters. A range of actions are available to deal with non-compliance, including education or restrictions to itinerary.
- 5.5.8. Further information on New Zealand's requirements is provided at the [Biosecurity New Zealand](#)⁷ website, including a [Frequently Asked Questions \(FAQ\)](#)⁸ document. Alternatively, the Ministry for Primary Infrastructure (MPI) can be contacted at standards@mpi.govt.nz.
- 5.6. **UNITED STATES OF AMERICA - CALIFORNIA**
- 5.6.1. The California State Lands Commission (SLC) regulates biofouling aboard all vessels of 300 gross registered tons or more arriving at California ports which carry, or are capable of carrying, ballast water.
- 5.6.2. **Reporting requirements:** Ships should submit SLC's "Marine Invasive Species Program (MISP) Annual Vessel Reporting Form," (SLC 600.12, Revised 04/20) at least 24 hours in advance of a ship's first arrival at any California port each calendar year. The form can be downloaded [here](#)⁹.

⁶ [CRMP](#)

⁷ <https://www.biosecurity.govt.nz/importing/border-clearance/vessels/arrival-process-steps/biofouling/commercial-vessels/>

⁸ <https://www.biosecurity.govt.nz/dmsdocument/41226-2020-Biofouling-survey-faqs.pdf>

⁹ https://slcprdwordpressstorage.blob.core.windows.net/wordpressdata/2020/05/Art4.8_MISP_AVR_FORM.pdf

- 5.6.3. **Recordkeeping & Management requirements:** For existing ships, the requirements apply after the first dry-docking on or after 01 January 2018. The requirements also apply to new ships delivered on or after 01 January 2018. The following records must be made available for the SLC's inspection and review upon request. Ships that do not maintain records consistent with the Biofouling Regulations' requirements, will have a 60-day "grace period" to develop compliant records:
- i. **Biofouling Management Plan.** The Biofouling Regulations incorporate by reference MEPC.207(62). Ships must have onboard a written biofouling management plan that is at least consistent with MEPC.207(62) and which addresses certain information depending on the biofouling management practice employed by the ship (e.g., anti-fouling coatings, anodes, injections systems, or electrolysis).
 - ii. **Biofouling Record Book.** Ships must have onboard a biofouling record book that is at least consistent with the format specified in MEPC.207(62) and which contains details of all inspections and biofouling management measures undertaken on the ship since its most recent dry docking, or since the beginning of a newly-delivered ship's service.
- 5.6.4. **Mandatory biofouling management requirements.** Anti-fouling coatings must not be aged beyond their effective lifespan. Ships that do not have anti-fouling coatings must demonstrate how they have adhered to their Biofouling Management Plan. With respect to niche areas, the anti-fouling practices used by a ship should be listed in its Biofouling Management Plan. There are additional requirements for vessels remaining in any port for 45 days or more. All instances of biofouling management must be recorded in a vessel's Biofouling Record Book. Furthermore, the Biofouling Regulations expressly prohibit propeller cleaning in California.
- 5.6.5. It should be noted that, as of 01 January 2020, SLC is authorised to access vessels to sample ballast water and biofouling for research purposes under the Marine Invasive Species Act.
- 5.6.6. A MISP Web Reporting Portal has been added for submission of required biofouling management (and ballast water) reporting forms. The MISP Reporting Portal is available [here](#)¹⁰.
- 5.6.7. Further information on the MISP is available from the SLC website: <https://www.slc.ca.gov/misp/>.

¹⁰ <https://misp.io/>

Revision History

Version	Description of Revision
1.0	First Issue