
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

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 Notice 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.

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[https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/MEPCDocuments/MEPC.207\(62\).pdf](https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/MEPCDocuments/MEPC.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.
- 3.7. 2022 Guidelines for Inspection of Antifouling systems on ships are contained in RESOLUTION MEPC.357(78) which recommends that the 2022 Guidelines be incorporated in the future revision of resolution [A.1155\(32\)](#) on [Procedures for port State control, 2021](#);

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).

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

- 4.2. The Biofouling Record Book is available to order from the BMA Publications section – see [BMA Marine Notice 51](#)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...*”.
- 4.4. This typographical error has been corrected in subsequent revisions of the Biofouling Record Book, but in the meantime, the BMA accepts the continued use of 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. The Department of Agriculture, Water and the Environment is the Australian government department responsible for administering the Australian Biosecurity Act 2015, under which biosecurity risks associated with biofouling on international vessels are managed.
- 5.4.2. Vessel operators can demonstrate proactive management of biofouling by implementing one of three accepted proactive biofouling management options.
- 5.4.3. Vessel operators will receive less intervention for biofouling if they comply with one of the following three accepted biofouling management practices:
 - i. Implementation of an effective biofouling management plan; or
 - ii. Cleaned all biofouling within 30 days prior to arriving in Australian territory; or
 - iii. Implementation of an alternative biofouling management method pre-approved by the department.

³ <https://www.bahamasmaritime.com/wp-content/uploads/2021/11/MN051-Publications-v1.0-ID-2543438.pdf>

- 5.4.4. An effective biofouling management plan must be vessel specific and should be included in ships' operational documentation. If a vessel reports to have implemented an effective biofouling management plan, a biosecurity officer may ask questions during an inspection to determine whether the biofouling management plan and biofouling record book includes the following information:
- i. The operational profile of the vessel
 - ii. biofouling management actions for all niche areas
 - iii. the name of the anti-fouling coating(s) used on the vessel and where it is applied
 - iv. the effective anti-fouling coating service life
 - v. planned in-water biofouling inspections of the hull at specific timeframes of the in-service period
 - vi. whether the planned in-water biofouling inspections were completed as per the biofouling management plan
 - vii. whether the biofouling management plan specifies management actions based on the outcomes of in-water biofouling inspections
 - viii. if applicable, descriptions of installed marine growth prevention systems (MGPS) and scheduled maintenance for the systems.
- 5.4.5. An effectively implemented IMO consistent biofouling management plan will be accepted. If the vessel has implemented a biofouling management plan then there is no need to also clean within 30 days to demonstrate proactive management of biofouling.
- 5.4.6. A vessel operator that cannot demonstrate implementation of proactive management practices will be asked additional pre-arrival questions. The department will use the responses to make an initial assessment of the biosecurity risk associated with biofouling on the vessel. The department may also conduct inspections of the vessel's submerged hull and niche areas to inform assessments of whether the vessel presents an unacceptable biosecurity risk associated with biofouling (further information is available in the Australian biofouling management requirements at [Managing biofouling in Australia](#)⁴).
- 5.4.7. Between 15 June 2022 and 15 December 2023 the department will be taking an education first approach to introducing the new biofouling requirements (see section 5 of the Australian biofouling management requirements at [Managing biofouling in Australia](#)).
- 5.4.8. The Marine Biosecurity Unit may get in contact with vessel operators when necessary to discuss concerns or provide guidance. The unit has powers to manage unacceptable

⁴ <https://www.awe.gov.au/biosecurity-trade/aircraft-vessels-military/vessels/marine-pest-biosecurity/biofouling>

biosecurity risks when necessary, however they work with vessel operators to apply these in the least burdensome way while managing the risk.

5.4.9. The approval process to conduct in-water cleaning operations in Australia is complex. The application process varies between state and territory jurisdictions and can involve multiple government agencies and port authorities who consider the biosecurity risks, environmental and port operation impacts of the activity. To obtain permission to clean vessels in Australian state or territory waters please contact the relevant authority which can be found on the [Department website](#)⁵.

5.4.10. Downloads of Australian requirements are available in PDF and Word formats.⁶ Any questions or clarifications may be addressed directly to the Department at marinepests@awe.gov.au.

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](#)⁷.
- 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.

5.5.4. Long-stay vessels often include:

- i. yachts and other recreational vessels

⁵ <https://www.awe.gov.au/biosecurity-trade/aircraft-vessels-military/vessels/marine-pest-biosecurity/biofouling/anti-fouling-and-inwater-cleaning-guidelines>

⁶ <https://www.agriculture.gov.au/sites/default/files/documents/Australian-biofouling-management-requirements.pdf>

⁷ <https://www.biosecurity.govt.nz/news-and-resources/resources/registers-and-lists/places-of-first-arrival-seaports/>

- 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 \(CRMP\)](#)⁸ that outlines alternate but equivalent ways of managing biofouling. As of the 13 October 2023, all biosecurity requirements for the topside of vessels and for biofouling are in the updated Craft Risk Management Standard (CRMS) for Vessels (2023). The new standard combines 2 previous standards – the Craft Risk Management Standard for Biofouling (2018) and the Craft Risk Management Standard for Vessels (2018). This comes into force from 13 October 2023. [Craft Risk Management Standard: Vessels 2023](#)⁹
- 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](#)¹⁰ website, including a [Frequently Asked Questions \(FAQ\)](#)¹¹ document. Alternatively, the Ministry for Primary Infrastructure (MPI) can be contacted at standards@mpi.govt.nz.

⁸ <https://www.mpi.govt.nz/import/border-clearance/ships-and-boats-border-clearance/biofouling/commercial-vessels/>

⁹ <https://www.mpi.govt.nz/dmsdocument/19757-Craft-Risk-Management-Standard-for-Vessels>

¹⁰ <https://www.biosecurity.govt.nz/importing/border-clearance/vessels/arrival-process-steps/biofouling/commercial-vessels/>

¹¹ <https://www.biosecurity.govt.nz/dmsdocument/41226-2020-Biofouling-survey-faqs.pdf>

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 are required to submit SLC's "Marine Invasive Species Program (MISP) Annual Vessel Reporting Form (AVRF) through the web-based platform, [MISP.IO](https://www.slc.ca.gov/misp/) at least 24 hours in advance of a ship's first arrival at any California port each calendar year. For more information regarding regulations, statutes, stakeholder communications, technical advisory groups, and legislation for the Marine Invasive Species Program, visit the California State Lands Commission website¹²
- 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.

¹² <https://www.slc.ca.gov/misp/>

- 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](#)¹³.
- 5.6.7. Further information on the MISP is available from the SLC website:
<https://www.slc.ca.gov/misp/>.

6. **Queries**

- 6.1. Any queries on this Notice may be directed to tech@bahamasmaritime.com or any BMA office.

¹³ <https://misp.io/>

