The Craft Risk Management Standard for Biofouling: enforcement and compliance

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Biofouling and biosecurity

**Biofouling**: growth of marine organisms on wetted surfaces

**Biosecurity risk**: up to 87% of non-indigenous marine species in New Zealand introduced via vessel biofouling

The marine environment is economically, socially and culturally important

- 80% of NZs biodiversity occurs in the sea
  - 44% of this is endemic
- Aquaculture and fisheries worth ~$1.5 billion a year
- Most New Zealanders live within 50 km of the sea
- The ocean is integral to Māori culture and values
The Craft Risk Management Standard for Biofouling (CRMS)

**Intent:**
To reduce risk of biofouling by requiring operators to take preventative measures to manage biofouling before they arrive into NZ.

- Came into force 15 May 2018
- World’s first biofouling standard at the national level
How to comply

Vessels must carry documentation showing that:

a) The vessel has been continually maintained following best practices, or

b) The vessel has been cleaned <30 days prior to arrival, or

c) The vessel is booked to be hauled out within 24 hours of arrival at an MPI-approved facility

OR: MPI approved Craft Risk Management
How are we verifying and enforcing the CRMS?

- Rules & Regulations
- Intelligence & Targeting
- Verification
- Risk Mitigation

- Craft Risk Management Standard
- 48-hour arrival documents
- Quarantine Officers
- Dive inspections

Image: Dive Co.
Assessing vessel biosecurity risk

All vessels arriving into New Zealand must submit arrival documentation 48 hours prior to entering NZT

- Assess all vessel risks
- Vessel given an overall risk rating and **biofouling risk rating**

<table>
<thead>
<tr>
<th>Biosecurity Act 1993 Sections 18 and 19</th>
<th>Master’s Declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Name of vessel:</td>
<td>Name of owner:</td>
</tr>
<tr>
<td>2. Type of vessel:</td>
<td>Country of origin:</td>
</tr>
<tr>
<td>3. Have you assessed biosecurity risk?</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Type of pest:</td>
<td>Number of pests:</td>
</tr>
<tr>
<td>5. Pest management programme:</td>
<td>Control measures in place:</td>
</tr>
</tbody>
</table>

To the best of my knowledge and belief, the above statements are true and correct in every particular and I am fully aware of the provisions of the Biosecurity Act 1993 sections 18 and 19.

Master’s Signature: ____________________________

Date: ____________ Day: ____________ Time: ____________ Port: ____________
Biofouling Risk Profiling

- **What are the patterns of vessel biofouling and predictors of increased biofouling risk?**
- Sampled 553 vessels from all classes
- Detailed hull surveys (photos, video, biotic sampling)
- Questionnaire
  - Biofouling maintenance regime
  - Voyage history
  - General information
Biofouling Risk Indicators

Commercial Vessels

- time since last dry dock
- vessel age
- Number of days stationary
- mean speed
- # of ports visited

Recreational Vessels

- avg. days in port
- lay-up period
- dry-dock interval

Biofouling risk profiling criteria

- Informative for identifying potential high-risk vessels
- Biofouling declaration questions need to be relatively easy to answer.
- Informative across vessel classes
# New Zealand (NZ) Biofouling and Ballast Water Declaration: Parts 1 and 2

TO BE COMPLETED FOR ALL VESSELS ARRIVING IN NEW ZEALAND

<table>
<thead>
<tr>
<th>Vessel Name:</th>
<th>IMO Number:</th>
<th>Voyage Number:</th>
<th>Arrival Date:</th>
<th>Arrival Port:</th>
</tr>
</thead>
</table>

## PART 1: BIOFOULING

1. Do you have a biofouling management plan on board?  
   - Yes [ ]  
   - No [ ]  
   - Unknown [ ]

2. Do you keep a biofouling record book?  
   - Yes [ ]  
   - No [ ]  
   - Unknown [ ]

3. When was the vessel built?  
   - Build Date: __________

4. When was the last renewal of anti-fouling coating to the hull?  
   - Antifouling Date: __________
   
   A. Do you have a certificate of treatment?  
      - Yes [ ]  
      - No [ ]  
      - Unknown [ ]
   
   B. What date is the anti-fouling coat effective until?  
      - Date: __________

5. In the last year how many times was the vessel moored or laid up in one location for 10 days or more, 20 days or more, and 30 days or more?  
   - ≥10 days: __________
   - ≥20 days: __________
   - ≥30 days: __________

6. When is the next haul out/dry dock intended for this vessel and in what location?  
   - Date: __________  
   - Location: __________

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Ministry for Primary Industries  
Manatū Ahu Matua
<table>
<thead>
<tr>
<th>Vessel Type</th>
<th>Bulker</th>
<th>Tanker</th>
<th>Container</th>
<th>RoRo</th>
<th>Reefer</th>
<th>Passenger</th>
<th>Fishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Todays Date (DD/MM/YYYY)</td>
<td>24/06/2018</td>
<td>2/09/2017</td>
<td>5/09/2017</td>
<td>30/09/2017</td>
<td>30-Sep</td>
<td>1-Sep</td>
<td>30/09/2017</td>
</tr>
<tr>
<td>Last Renewal of Anti-Fouling coating (calculated number of days)</td>
<td>1522</td>
<td>2530</td>
<td>266</td>
<td>1467</td>
<td>383</td>
<td>809</td>
<td>1429</td>
</tr>
<tr>
<td>Port stays 10 days or more*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Port stays 20 days or more*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port stays 30 days or more*</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of ports called into in the last 12 months.</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Tonnage (only for passenger vessels)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33</td>
<td></td>
</tr>
</tbody>
</table>
Vessel submits pre-arrival documents

Assessed as Low, Medium, or High risk

A percentage of vessels from each risk category selected for audit of documentation (100% high risk)

Vessel passes audit - meets requirements

Vessel fails audit - referred to border staff for verification (i.e. hull inspection) and/or action
Example: High Risk Vessel

- **Age of AFC:** 50 months/ 60 month service life → **High**
- **Periods idle:** 60 day lay up ending 2 months ago → **High**
- **Number of ports:** 31 ports in last 12 months → **High**

**Overall risk:** **High**
High Risk Vessel: Verification

Documents supplied:
- Antifouling certificate
- Strong Biofouling Management Plan and Record Book with records
- Hull cleaning report from after lay up period

→ Vessel is now **Low Risk**

Complies with the CRMS by demonstrating best practice maintenance
Example: Low Risk Vessel

- **Age of AFC:** 20 months/ 60 month service life → Low
- **Periods idle:** None → Low
- **Number of ports:** 20 ports in last 12 months → Low

Overall risk: **Low**

This vessel is randomly chosen for verification
Low Risk Vessel: Verification

Documents supplied:
- Antifouling certificate
- No Biofouling Management Plan or Record Book
- Hull inspection report indicating heavy fouling and AFC damage. No other records of maintenance, or scheduled maintenance

→ Vessel is now **High risk**

Does not comply with CRMS
Non-compliant vessel: Action

Failed verification → vessel is referred to compliance staff

MPI is taking compliance action based on level of fouling and any other notable factors

- Provision of education
- Dive inspection
- Restriction of stay
- Direct vessel to clean at dry dock
- Refuse entry

Decreasing risk
Non-compliant vessel: Action

Example: Bulk carrier vessel
• Calling 5 ports loading logs
• Total 20 days in NZT
• High risk and cannot produce evidence of continual maintenance

ACTION
→ Notice of Direction requiring dive inspection
  → non-compliant with thresholds (LOF4 and taxonomic groups not in thresholds)
→ Notice of Direction issued restricting itinerary to discharge and leave NZT
Compliance actions so far

Feb 2017-May 2018:
• 3 vessels directed to leave NZT
• 3 vessels directed to dry dock
• 1 denied entry to NZT

May-June 2018:
• 273 vessel arrivals, 32 chosen for audit
• 8 have failed verification

5 issued Notices of Direction (restriction of itinerary), 2 voluntarily restricted itinerary, 2 had documentation on board
Key learnings and challenges

- Knock on effects of compliance actions
- Communicating to a diverse and complicated industry
- Balancing different interests
- The perception of risk
- Being (one of) the first in the world to regulate biofouling
Acknowledgements

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