Ministry for Primary Industries
Manatū Ahu Matua

In-water cleaning?

New (perspectives) Zealand

Eugene Georgiades

2014 Prevention First Symposium, Long Beach, California

www.mpi.govt.nz

New Zealand Regulatory Update

- Craft Risk Management Standard for Vessel Biofouling signed off
- 4 year “early adoption period” (voluntary)
- Mandatory regulation to begin 2018
- Alignment with IMO Guidelines
- Risk minimisation

For more details

- Standard
- Guidance document
- Science underpinning standard

New Zealand (and Australia): In-water cleaning

- 1997
  - Code of Practice for Anti-fouling and In-water Hull Cleaning and Maintenance (ANZECC Code).
  - Concerns
    - Release of biocides
    - Establishment of non-indigenous species
- 2009
  - Code reviewed
- 2013 +
  - Guidelines released
  - Undergoing 1 year review

NO IN-WATER CLEANING

IN-WATER CLEANING but…

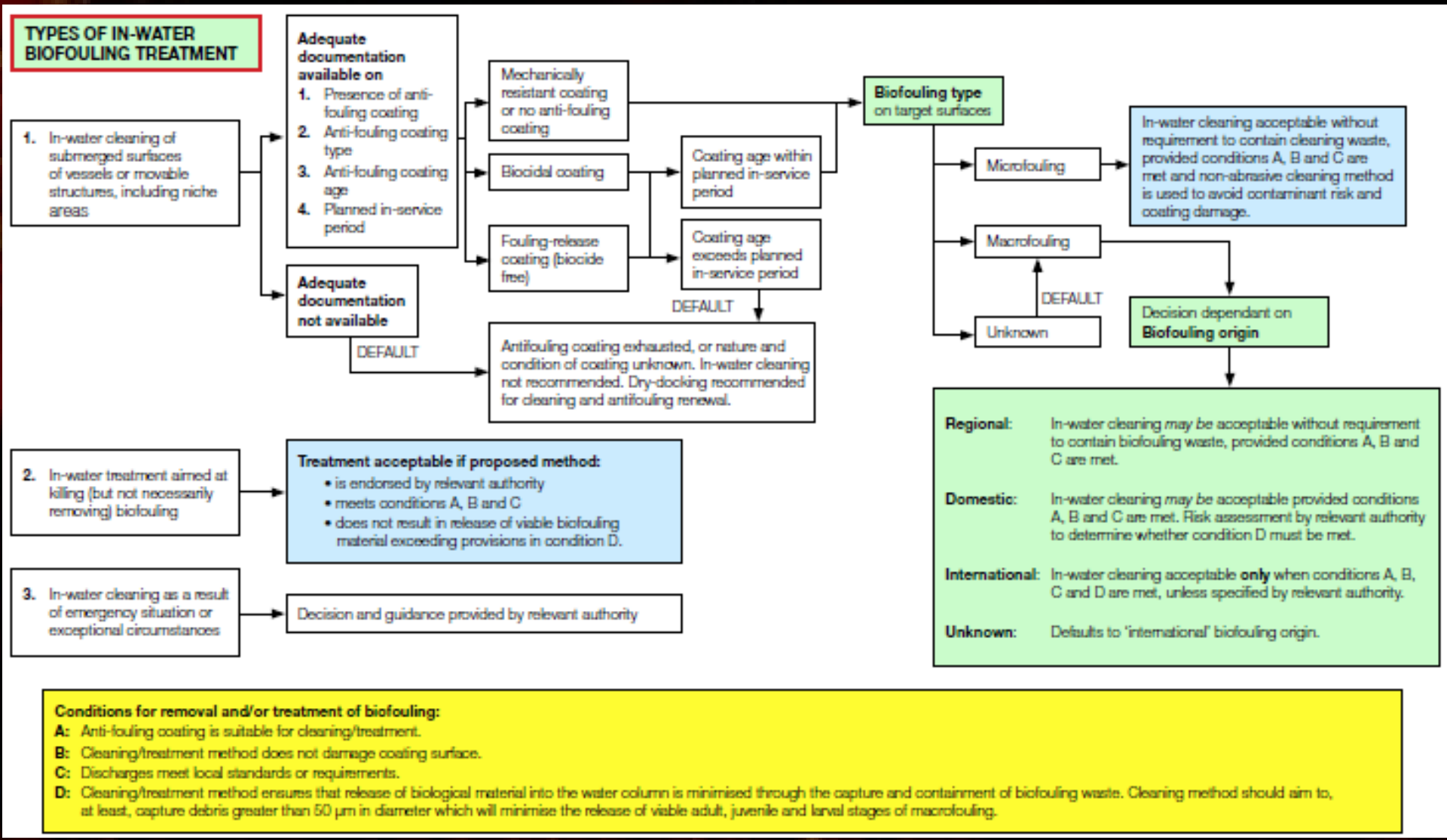
Image: New Zealand Diving and Salvage Ltd

New Zealand (and Australia): In-water cleaning

- Guidelines (principles)
- In-water cleaning
  - Regular is effective
  - Not a substitute for poor practice
  - Suitable anti-fouling coatings only
  - Not suitable on coatings at the end of their service life
- Clean before you leave
- Minimise discharges
- Immediately report suspected non-indigenous species

Image: New Zealand Diving and Salvage Ltd

New Zealand (and Australia): In-water cleaning



New Zealand (and Australia): In-water cleaning

- Decision Support Tool for in-water cleaning
  - Anti-fouling coating
    - Presence, type, age, length of service life
  - Fouling
    - Type, origin
  - Method
    - Type, suitability, re-capture ability, discharge

Image: New Zealand Diving and Salvage Ltd

Balancing the risks of in-water cleaning

- Research Question
  - *“When do the environmental costs of releasing non-indigenous species and chemical contaminants during in-water cleaning outweigh the risks of no action?”*
- Approach taken
  - Key questions
  - Literature review and modelling/risk assessment
  - Combine chemical and biosecurity risk assessments
  - Knowledge gaps?

“Vessel dry-docking in Singapore” Daniel Kluza (MPI)

Balancing the risks of in-water cleaning

- Scenarios examined
  - Vessel origin
  - Vessel type
  - Vessel size
  - Paint type
  - Cleaning method
  - Number of vessels cleaned
  - Ports and marinas

Daniel Kluza (MPI)

Balancing the risks of in-water cleaning

- General conclusions (International vessels)
- All vessels (Biocide free)
  - Acceptable (without capture)
    - Slime layer
  - Acceptable (with capture)
    - visits > 48 h and Level of Fouling (LOF) ≤ 3
- Biocidal systems
  - Restrictions
- LOF > 3
  - Not acceptable

Daniel Kluza (MPI)

Balancing the risks of in-water cleaning

- General conclusions (Domestic vessels)
  - Cleaning location
  - Acceptable
    - Biocide-free
    - Port of origin
  - Restricted / Not acceptable
    - Fouling origin
    - Biocide
    - Duration of visit
    - Level of fouling
    - Presence of non-indigenous species

Daniel Kluza (MPI)

Current Research

Determining the efficacy of in-water cleaning systems

- Objective
  - Develop standard testing requirements for in-water cleaning systems with respect to biosecurity risk

- Methods
  - Categories
  - Investigation of biosecurity risks
  - Standard setting
  - Test development

Image: NIWA Ltd

Current Research

- Results
  - In general, biosecurity risks associated with:
    - Set up/accessing the hull
    - Cleaning water-line
    - Cleaning general hull, niche areas and edges
    - Capture of waste material
    - Filtration/treatment of waste material
- To come
  - Framework to test each cleaning category

Image: NIWA Ltd

Future research

- Niche areas
  - Small proportion of the hull
  - High susceptibility to biofouling
  - Increased fouling abundance and diversity relative to hull
  - Reactive measures to mitigate biosecurity risk lacking

- Research objectives
  - Evaluate methods
  - Environmental cost/benefit
  - Develop data requirements for efficacy testing

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