

Protecting Australian marine environments: Understanding aquatic biosecurity risks and the impact of intervention strategies on reducing the risks of introduction of non-indigenous species

Manyweathers, J., Hayes, L., Xie, G., Rampano, B., Hernandez-Jover, M.

Background

- Australian aquatic environments are at risk of non-indigenous species (NIS) that can impact livelihood and food security.
- Recreational, permanently moored vessels play an important role in the spread of these species.
- Little is known about boat cleaning and biosecurity practices and perceptions of NSW marine estate users.

Project aims

1. Understand the risk posed by recreational vessels for NIS incursions in the NSW marine estate in Australia and identify interventions for risk mitigation
2. Evaluate the impact of these interventions in the reduction of biosecurity risks

Methods

Two research phases using a mixed methods approach: Interviews and cross-sectional study of marine estate stakeholders and vessel owners

1

Phase 1

COM-B framework and Bayesian Network modelling for biosecurity practice understanding, population segmentation and inform interventions

2

Phase 2

Reassess biosecurity engagement and evaluate effectiveness of interventions

2021



2024

Results – Phase 1

- Cross-sectional study: 72 vessel owners
- Interviews: 9 stakeholders, including vessel owners
- Need to invest in **strengthening relationships** between marine estate stakeholders and use **targeted and diverse communication**

Results – Phase 2

- Cross-sectional study: 141 vessel owners
- Interviews: 19 vessel owners
- **Limited engagement with interventions –BUT...**
- **Some increased awareness of risk** and
- **High level of interest** in protecting the waterways

Awareness of :	Phase 1	Phase 2
The need to clean biofouling	92.6%	94.6%
Biofouling causes damage to the waterway health	62.3%	76.3%
Requirement to report pests and diseases	52.7%	54.5%

