# Protecting Australian marine environments: Understanding aquatic biosecurity risks and the in

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 nonindigenous 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



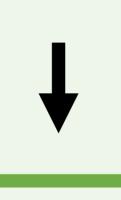
#### Phase 1

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



### Phase 2

Reassess biosecurity engagement and evaluate effectiveness of interventions









#### 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%

"I don't know too many boaties who don't love the environment that we get to use our boats in and would do anything to make it either better or to keep it safe".

Vessel owner

