

# Abalone Industry Reinvestment Fund (AIRF)

Update: February 2024

## Developing a spatial planning framework for Longspined Sea Urchin Control in Tasmania

Lead Agency: Institute of Marine and Antarctic Studies (IMAS)

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Status: CURRENT

### Aims and Objectives:

1. Collate available information on key factors influencing the acceptable extent of Longspined Sea Urchins barrens habitat within a region or reef in Tasmania including:
  - a) Ecological value: ecological importance and diversity; presence of endangered and/or threatened species/communities
  - b) Economic value: commercial importance (value) of the reef-dependent species (e.g., abalone, rock lobster); importance to tourism operators
  - c) Social/cultural value: broad cultural and societal importance, importance to recreational fisheries and general recreational use (e.g., diving).
2. Based on information collated in objective #1, conduct targeted community surveys to augment knowledge on cultural value of reef among key areas in Tasmania. This would include dedicated engagement/extension activities where participatory mapping would be employed along with specific survey questions related to cultural value of place.
3. Provide a quantitative assessment and synthesis of key factors influencing extent of barrens based on a zoning scheme relevant to management (e.g., management areas of abalone/commercial dive fisheries);
4. Propose a decision-support framework (model) to set Target Reference Points within a region based on identified key factors, and if relevant provide recommendations on additional research needed to extend the framework to other jurisdictions in southeast Australia (for example, where Longspined Sea Urchins are endemic).

The intermediate milestone of identifying and collating relevant datasets on key factors influencing the acceptable extent of Longspined Sea Urchin barren habitat within a region: ecological, economic and social/cultural values are completed. The collation of datasets exists as a local database – some of the datasets are available through the [Tasmania's Marine Atlas](#), but not all. The included information is summarized below:

1. Ecological value:
  - a. Distribution data on Matters of National Environmental Significance (MNES) under the EPBC Act
  - b. Distribution of benthic habitats – including rocky reefs
  - c. Kelp presence and density, including but not limited to Giant Kelp
  - d. Restoration and/or conservation sites, including Giant Kelp restoration trial sites by The Nature Conservancy/IMAS
  - e. Tasmanian Marine Nature Reserves and Australian Marine Parks
2. Economic value:
  - a. Commercial catch of Longspined Sea Urchin, abalone, Southern Rock Lobster, and reef-dependent scalefish species (Bluethroat Wrasse, Purple Wrasse, Snook, Banded Morong)
  - b. Distribution and abundance from other sources (e.g., scientific surveys) of Longspined Sea Urchin and abalone
  - c. Distribution and extent of urchin barens (historical and contemporary)
  - d. Southern Rock Lobster translocation data and stock rebuilding zone
  - e. Other uses: aquaculture (marine leases), vessel traffic data (AIS; cargo, tanker, passenger, fishing)
  - f. Tourism value (Foreshore Recreation and Tourism Value South)
3. Social/cultural value:
  - a. Recreational use: dive sites, charters, fishing (abalone, rock lobster), Fish Aggregation Devices and artificial reefs, boat ramps, vessel traffic data (AIS; pleasure crafts and sailing), and recreational restrictions and closures
  - b. Heritage: National Heritage List, Foreshore European Heritage Value
  - c. Indigenous: Indigenous Protected Areas
4. Relevant zoning schemes for subsequent objectives:
  - a. Commercial fishing blocks/sub-blocks: abalone, Southern Rock Lobster, scalefish