

Abalone Industry Reinvestment Fund (AIRF)

Hit them while they're down 2020 Centro Cull

Lead Agency: Jeremy Huddleston

Funding: \$24,600

Start Date: 1 March 2020

End Date: 15 April 2020

Status: COMPLETED

Aims and Objectives:

To cull areas of incipient barrens located but not culled last October. To extend range of cull, and to revisit GPS location of previous Cull. Observe Seaweed and marine life recovery.

Final Report:

AIRF Project Report: Centro Cull Munro Bight 2020

Team Leader: Jeremy Huddleston

Project Location: Abalone fishing Block 22a: Munro Bight

Commencement Date: FV Suicidal Dream departed Hobart on Monday 20th April 2020 with 2 dinghies on board.

Project Team: 4 divers and 2 deckhands, aiming to complete 12 hours of Centro culling per dive team over the 3day trip.

Primary Objective: To cull areas of incipient barrens located but not culled last October. To extend range of cull, And to revisit gps location of previous Cull. Observe Seaweed and marine life recovery

Data recording: GPS Vessel Location Data and Dive Depth loggers were utilised to record spatial and temporal data for each dive profile. The number of urchins culled was recorded by each diver using a clicker counter.

The below image represents in **Red** the cull zones and in **Green** the shallow spot jumps carried out where the divers found very little or no Centro populations in October and over laid in **Blue** dive sites from 2020 April project.

Key project actions/outcomes:

- 12 dive hours per dinghy was successfully completed over 3 days
- Dives on previous sites revealed Seaweed and Abalone recovery, in all but one extremely cryptic area where urchins had returned to a est 50 percent of original population.
- Seaweed is recovering quicker than expected, 1 area is recovering after only 5 weeks post a harvest Day
- Harvest day completed in block 22a by Beau, Jeremy and Mic revealed a harvest rate of 140kgs per hour in a specific non culled “virgin site” at a depth of 15-20meters
- A total of 15100 Centro urchins were culled. Mostly in range extension areas
- 30-40 percent of the Centro in Munroes Bight are below Market size

Key observations/recommendations:

- Divers observed almost night and day difference in original cull locations
- Divers noted continued weed, abalone and lobster recovery in shallow bottom previously affected by the June 2016 storm event.
- Divers observed a extremely “healthy” degree of recruitment of abalone populations within original cull sites and most productive areas of 22a
- Divers noted almost zero population of lobster, abalone or scale fish within the larger extensive Centro barrens.
- We believe additional culling and or harvesting will be required in this area particularly with the large number of small non marketable centros in the population .

Dive Specific Findings:

- In this region, working depth is an important dive planning consideration. Divers were able to cull for up to 4.5 hours on the first day but as the trip went on, combined bottom time was a limiting factor in available dive time.
- Moving to a 3 day cull was beneficial in managing crew fatigue and Dive profiles
- Revised Crew remuneration of \$1300 per diver per day and \$500 per deckhand per day proved acceptable and the crew would be happy to participate on further projects on these rates
- The crew was extremely buoyed by the recovery of productive abalone habitat, and abalone stocks are recovering extremely well, Whilst 22a is a work in progress we have made some large steps in returning this area into the fishery

Conclusion:

A Project video has been prepared and will be available to all interested parties.

Videos on Cull 1 and 2 can be found on you tube by searching A.I.R.F Urchin Project

I believe the project was a great success, and has further cemented my view that systematic culling in highly productive abalone producing areas is 100 percent worthwhile and is already showing great results. With continued targeted culling and harvesting I have no doubt we can return the biodiversity to these important ecosystems from 0-20m

Block 22a is showing great signs of abalone recruitment and seaweed recovery to 20m , There is some Centro issues beyond that in the 20-27m range

I would like to thank Mick, Beau, John, James and Hamish for their hard work and dedication to this project.

Data Logger information:

Diver1: Mo189 U11882

Diver 2: Moo32 U13334

Diver 3: Moo54 U15143

Diver 4: Mo241 U14457

