ABALONE INDUSTRY REINVESTMENT FUND

PRIMARY OBJECTIVES:
• support projects to increase the productivity of the abalone resource on the east coast and
• support projects to reduce the long spined sea urchin population on the East Coast

ADMINISTRATION
• The fund is administered by the AIRF committee which consists of membership from the Tasmanian Abalone Council (TACL), the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE) with advice provided by the Institute for Marine and Antarctic Studies from the University of Tasmania.
• The AIRF Committee is chaired by Dr Ian Dutton, Director, Marine Resources.
The Challenge – to rehabilitate previously productive abalone reef
FUNDS available for investment;

The AIRF Committee hit the ground running in early 2019 with the inaugural meeting held on 7th February 2019 – a further 6 meetings have been held this year. At this meeting, DPIPWE confirmed that $5.1 million allocated to the AIRF is to be disbursed over 5 years as follows:

- 2018/19 $600k
- 2019/20 $900k
- 2020/21 $1.2 M
- 2021/22 $1.2M
- 2022/23 $1.2M
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CENTRO SUBSIDY

As of October 2019, a total of $510,000 has been paid out as Centro roe harvest subsidy to 21 urchin divers. NOTE: Of the 21 urchin divers, 16 are dual license holders i.e. hold abalone and commercial dive (urchin) licenses.

The Centro subsidy has so far facilitated the harvest of 770.5 tonnes of live Centro – this equates to the removal of over 2 million urchins from Tasmania’s east coast since the subsidy commenced in 2016.

The AIRF Committee have nominally set aside $420k for the Centro subsidy (harvest and/or culling) for the balance of the 2019/20 year.
In the second quarter of 2019, the AIRF Committee initiated a process inviting expressions of interest (EOIs) for project funding.

Examples of the areas and types of suitable projects sought included;

• abalone stock enhancement
• habitat survey and long spined sea urchin barren mapping
• management and mitigation of long spined sea urchins
• effects of global warming on abalone and abalone habitat
• public outreach and education to promote understanding of issues such as abalone fishery management and urchin control strategies

The AIRF Committee has reviewed a number of projects to further the objectives of the AIRF. So far seven (7) projects have been approved and have either commenced or are about to commence.

These projects are funded from the 2018/19 and 2019/20 AIRF funding allocations from Treasury. Additional calls for further project Expressions of Interest (EOI’s) will be made throughout the five year funding deal.

Project 1 Decadal re-survey of long-term lobster experimental sites to inform Centrostephanus control

Lead Agency: Institute for Marine and Antarctic Studies (IMAS)
End Date: 31 December 2020
Status: IN PROGRESS

Aims and Objectives:
The proposed project will re-survey baseline sites established during a previous Fisheries Research Development Corporation project (FRDC#2007/045) that investigated the effectiveness of rebuilding large lobsters to mitigate risk of urchin overgrazing.
Project 2 Centrostephanus Exhibition

Lead Agency: Institute for Marine and Antarctic Studies (IMAS)
End Date: 1 March 2020
Status: IN PROGRESS
Aims and Objectives:
This project is for a 3-month Centrostephanus exhibition in the public space at the IMAS Salamanca between Jan and March 2020. The display will tell the story of the urchin problem in Tasmania and inform about control options. The exhibition will contain live urchins, photographic exhibition, public art, info-posters and brochures on impacts, video display of barrens and fishing, 360 Virtual Reality (VR) setup. There will also be launch and finale events which would include talks, urchin tastings, interactive displays, VR.
Project 3 Resetting urchin barrens: liming as a rapid widespread urchin removal tool

Lead Agency: Institute for Marine and Antarctic Studies (IMAS)
End Date: 31 August 2020
Status: IN PROGRESS
Aims and Objectives:
Liming has been used in North America and Norway as an effective method to remove urchins from extensive large scale barrens and promote algal community recovery and the re-establishment of a healthy biodiverse reef ecosystem. The aim of this preliminary liming project is to determine the effectiveness and feasibility of using quicklime on Centrostephanus in Tasmania, and determine if large scale investment and field trials and application technology are warranted.
Project 4 Commercial upscaling of urchin fertiliser

Lead Agency: Institute for Marine and Antarctic Studies (IMAS) in partnership With RTS Pauaco
End Date: 31 August 2022
Status: IN PROGRESS
Aims and Objectives:
Urchin harvesting is currently the most significant control measure utilised to mitigate the spread of urchin barrens. Over $550k in subsidies provided to the industry since 2016 has resulted in over 700 t of urchin being landed. Of this, approximately 500 t is waste, which comprises shells, spines, guts and liquid/moisture. Dumping costs are currently in excess of $200/t equating to $100k spent on disposal thus far. Eliminating dumping costs and turning the waste into a saleable product is an obvious means to increasing industry profitability and decreasing the need for a subsidy. The aim of this project is to establish commercial processing of urchin waste, and test two key waste streams as an agricultural product on commercial crops; dried solids as a soil conditioner/fertiliser, and liquids to use as a foliar spray to enhance frost resistance.
Project 5 Modelling the fine-scale dispersal of Centrostephanus rodgersii larvae

Lead Agency: Institute for Marine and Antarctic Studies (IMAS)
End Date: 1 March 2020
Status: IN PROGRESS
Aims and Objectives:
• Construct a robust model (based on previous work of Sean Tracey) of larval dispersal for Centrostephanus rodgersii around the east coast of Tasmania using existing oceanographic data (piecing together high and low resolution)
• Calculate the most likely sources for large recruitment events to the east coast of Tasmania
• Predict whether the Tasmanian population may be self-recruiting or what oceanic changes may lead to self-recruitment
• Set model up to be capable of addressing management decisions, such as which Tasmanian reefs would be most likely to produce larvae that survive the winter, which reefs pose the greatest risk of further range extension
• The model could be flexible to allow input data for abalone or rock lobster larvae
Abalone Industry Reinvestment Fund

Project 6: **Centro Cull – the Southern Front**

Principal Investigator: Jeremy Huddlestone  
End Date: November 2019  
Status: Completed

Aims and Objectives:
Whilst the urchin harvesting subsidy has been very effective in encouraging divers to target Centro in the northern and central parts of the east coast, the southern extremities of Centro distribution have not been harvested to any significant extent.

- This is largely because they are not plentiful enough to be commercially attractive to harvesters. It may be a more effective mitigation strategy to encourage targeted culling of Centro along the coast between Lagoon Bay and Cape Pillar.
- This project is a trial to determine the cost effectiveness of targeted culling as an alternative means of mitigation with a view to potentially initiating culling in other sections of the east coast.
Project 7 *Centrostephanus Response Strategy*

Lead Agency: CSIRO  
End Date: November 30 2020 (Phase 1)  
Status: IN PROGRESS  

Aims and Objectives:  
The project will work with the AIRF Committee and key stakeholders to develop a *Centrostephanus Response Strategy* that guides priority response, research and education actions and provides a framework for strategy monitoring. Future phases will learn from experience to refine actions.
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The AIRF committee is currently in the process of engaging a Communications Officer who amongst other things, will be responsible for:

• Liaising regularly with the Principal Investigators of each AIRF project to develop a comprehensive understanding of all facets of each project and report back to the AIRF Committee on a regular basis.
• Write a quarterly e-newsletter (i.e. 4 per annum) summarising AIRF project outcome/progress for distribution to stakeholders.
• Create a website which is the go-to portal for industry stakeholders and the public to access. Website to have general information about the AIRF, AIRF project summaries and progress updates in a format suitable for "general consumption"
THE END........HEALTHY PRODUCTIVE REEF SYSTEMS WITH LOADS OF ABALONE