

ANTARCTIC FISHERIES STRATEGIC RESEARCH PLAN

2011 – 2015

This Antarctic Fisheries Strategic Research Plan was developed by the Sub-Antarctic Resource Assessment Group (SARAG) and identifies areas of high priority research for Sub-Antarctic Fisheries for the period 2011/12 – 2015/16. The current membership of SARAG comprises:

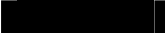


Name	Position
Dr Malcolm Haddon	SARAG Chairman
Mr Martin Exel	Industry
Mr Les Scott	Industry
Dr Geoff Tuck	CSIRO
Dr Richard Hillary	CSIRO
Ms Sally Wayte	CSIRO
Dr Dirk Welsford	Australian Antarctic Division
Dr Graham Robertson	Australian Antarctic Division
Mr Ian Hay	Australian Antarctic Division
Dr Rosemary Gales	DPIPWE
Dr Heather Patterson	ABARES
Mr Peter Neave	AFMA

Only projects, which are considered to be of high priority, are included in the Strategic Research Plan. The numbering is for ease of reference but does not necessarily reflect any order of merit or priority.

SARAG recognises that it will require significant resources and funding to complete all the items on the Strategic Research Plan. Given the current funding environment it is possible that all of these matters will not be able to be completed within the 5-year timeframe of this Plan. However, in preparing this Plan SARAG has tried to present a picture of the level of work required to address issues in relation to the management of the fisheries.

Projects identified can either be carried out for the Macquarie Island Toothfish Fishery (MITF), the Heard Island and McDonald Islands (HIMI) Fishery, Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) New and Exploratory fisheries or a combination of these fisheries. Where projects are identified to be carried out for only one of the fisheries how the results can be extended to cover both fisheries should be clearly indicated.

NOTES

-  Indicates that the project has been funded
-  Indicates that the project has not been funded
-  Indicates no further work contemplated

ANTARCTIC FISHERIES STRATEGIC RESEARCH PLAN 2011/12 – 2015/16

OBJECTIVE	PURPOSE	PROJECTS	TIMEFRAME						Project U'way? Y/N	Details
			10/11	11/12	12/13	13/14	14/15	15/16		
1	Stock Assessment	a) SARAG stock assessment - MITF	■	■	■	■	■	■	Yes	CSIRO funded by AFMA Research Fund (ARF) until February 2013.
		b) CCAMLR stock assessment – HIMI	■	■	■	■	■	■	Yes	AAD core funding.
		c) Joint Kerguelen Plateau toothfish assessment with France	■	■	■	■	■	■	No	Funding being sought from FRDC for 2 post doctoral positions to develop assessment model
	Quantify stock size and demography of key species	a) Acoustic monitoring (echo listener) juvenile icefish - HIMI	■	■	■	■	■	■	No	
		b) Random stratified trawl surveys - HIMI	■	■	■	■	■	■	Yes	Industry based project supported through AFMA levy-base and core AAD funding.
	Spatial stock structure and movement dynamics of toothfish	a) Genetics work	■	■	■	■	■	■	No	Possibly part of a broader CCAMLR international genetics survey.
		b) Conventional tagging work	■	■	■	■	■	■	Yes	Ongoing project with core AAD/CSIRO/industry support.
		c) Predicting rates of movement for tagged fish	■	■	■	■	■	■	No	
	Investigate natural mortality of toothfish	a) Age specific tag recapture rates	■	■	■	■	■	■	Yes	CSIRO funded by AFMA Research Fund (ARF) until November 2011.
	Investigate spawning dynamics of toothfish	a) Quantifying level of spawning in HIMI and MITF	■	■	■	■	■	■	No	FRDC tactical research funding
Conservation value and fishery potential assessment in HIMI Conservation Zones	a) Exploratory fishing survey	■	■	■	■	■	■	Yes	Industry funded and now completed.	
2	Management procedures for setting fishing controls	a) Development of MSE model for MITF	■	■	■	■	■	■	Yes	Funded by AFMA Research Fund (ARF) until February 2013 (same project as 1(a) above).
		b) Development of MSE model for HIMI	■	■	■	■	■	■	Yes	AAD core funding

OBJECTIVE	PURPOSE	PROJECTS	TIMEFRAME						Project U'way? Y/N	Details	
			10/11	11/12	12/13	13/14	14/15	15/16			
3	Collect fisheries and biological data	Provide data for stock assessment of toothfish and icefish	a) Otolith collection	■	■	■	■	■	■	Yes	Ongoing observer program with core AAD support.
			b) Otolith reading/age analysis	■	■	■	■	■	■	Yes	AAD funded through AFMA research fund.
			c) Catch and effort data	■	■	■	■	■	■	Yes	Compulsory completion of logs AAD & SARAG analysis
			d) Design and evaluation of observer data in terms of their benefit in the stock assessment of sub-Antarctic fisheries	■	■	■	■	■	■	Yes	SARAG involvement: AAD, CSIRO will provide the core funding with a small input from ARF
			e) Design and evaluation of observer data in terms of their benefit in environment/bycatch assessment of sub-Antarctic fisheries	■	■	■	■	■	■	Yes	SARAG involvement: AAD, CSIRO will provide the core funding with a small input from ARF
			f) Quantify the amount of illegal and non-reported catches of both target species and ecologically related species	■	■	■	■	■	■	Yes	AFMA surveillance program and input from Coalition of Legal Toothfish Operators (COLTO)
4	Ecological assessment of the fishery	<p>Assess and determine a wide range of ecological impacts including but not limited to:</p> <ul style="list-style-type: none"> ▪ assessment of the ecological impacts of trawl fishing for toothfish and icefish ▪ examine the robustness of the toothfish TAC from an ecological perspective including ecological effect on the non-target species (eg bycatch, ecologically related species); ▪ impacts of longlining; and ▪ role and assessment of refuge areas 	a) Ecology of the HIMI marine ecosystem	■	■	■	■	■	■	Yes	AAD study to address predator prey interactions, benthic ecology and biological oceanography.
			b) Monitoring by observer program	■	■	■	■	■	■	Yes	Industry funded
			c) Effects of trawling on benthic ecosystems for HIMI	■	■	■	■	■	■	Yes	Ongoing observer program with research provision by industry and core AAD support. FRDC funded project to February 2012.
			d) Benthic habitat project (HIMI)	■	■	■	■	■	■	Yes	Project through AAD – comparative study of MPA regions.
			e) Effects of trap fishing	■	■	■	■	■	■	Yes	Trial to be undertaken by industry.
			f) Effects of longline fishing on benthic ecosystems	■	■	■	■	■	■	Yes	FRDC funded to February 2012.
			g) Small fish sampling with IYGPT at Heard Island	■	■	■	■	■	■	No	Occasional project which has been undertaken in the past with industry and AAD core support.

OBJECTIVE	PURPOSE	PROJECTS	TIMEFRAME						Project U'way? Y/N	Details
			10/11	11/12	12/13	13/14	14/15	15/16		
	Risk assessment of incidental bycatch species and informal review of observer coverage (in particular sleeper sharks)	a) Apply risk assessment to skates and rays							Yes	Tagging project funded by AAD and Industry.
		b) Bycatch monitoring							Yes	Monitoring by observer program.
	Identification and analysis of bycatch	a) Bird and mammal interactions							Yes	Monitoring by observer program.