



Fisheries New Zealand

Tini a Tangaroa

Ministry for Primary Industries
Manatū Ahu Matua



Fisheries New Zealand Update 2018

Tiffany Bock

23/24 May 2018 – New Zealand sea lion/rāpoka Forum/Advisory Group

Growing and Protecting New Zealand



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Outline

1. Research underway
2. Squid 6T Operational Plan Update
3. Research planned for 2018/19
4. Other fisheries work planned 2018/19



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Research underway

PRO 2017-10: **Analysis of New Zealand sea lion tracking data to estimate overlap with fisheries**

- Outputs will support development of Squid 6T Operational Plan for 2019/20
- Spatial overlap methodology can likely be applied to other areas in future where tracking data is available
- **Completion Date:** 31 December 2018



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Research underway

PRO 2017-08C: Effects of Auckland Islands sea lion pup condition and survival on critical demographic rates

- This project will inform interpretation of observed changes in demographic rates
- Outputs from this project may be used to inform the update of the demographic population model for Auckland Islands sea lions
- **Completion Date:** 31 March 2019

Squid 6T Operational Plan Update

- Squid 6T Operational Plan Technical Advisory Group met 14/15 June 2017
 - Development of Squid 6T Operational Plan for 2017/18 (and 2018/19)
 - Future direction and relevant research

Operational Plan to Manage the Incidental Capture of NZ sea lions in the Southern Squid Fisheries (SQU6T) 2018 and 2019

- Fishing Related Mortality Limit (annual) – 38 sea lions
- Strike Rate – 6.34 sea lions/100 tows
- Discount Rate – 75% (assumed escape and survival where SLED is deployed)
- All vessels must provide 72 hours notice before any trip where they intend to fish in SQU6T
- All vessels must report fishing effort on a weekly basis
- FNZ has committed to provide a minimum of 70% observer coverage across all tows in SQU6T



Squid 6T Fishery Update

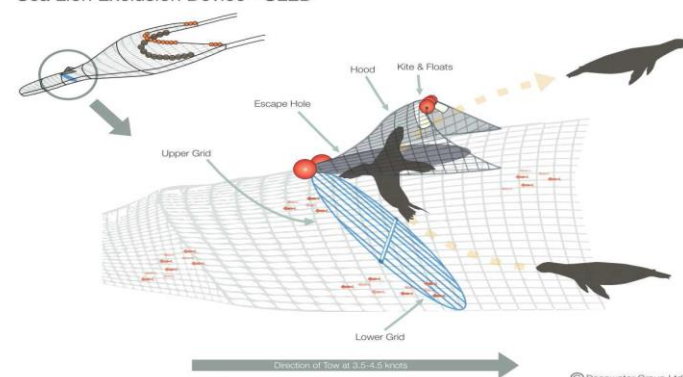
- Week 21 ended on Sunday 20 May with 12 tows conducted by 2 vessels in that week with 100% of tows observed.
- A total of 88% of the 1,063 tows in SQU6T have been observed and 2 sea lion mortalities have been reported in the fishery to date.
- The estimated fishing-related mortality of sea lions in the SQU6T fishery is 17, which is 44% of the FRML



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Sea Lion Exclusion Device - SLED



Squid 6T Operational Plan - Next steps

- Squid 6T Operational Plan Technical Advisory Group met 8 May 2018

									2019										
	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Operational Plan																Consultation on revised Operational Plan			Operational Plan agreed
Squid 6T Technical Advisory Group	SqOPTAG - SQU Plan Research Plan Additional research proposals						SqOPTAG - Cryptic multiplier first presentation				SqOPTAG- Cryptic mortality multiplier			Presentation of population model outputs & PST Discuss options					
Sea Lion TMP	SL Forum & Advisory Group mtgs												SL Forum & Advisory Group mtgs						
PRO2017-10 Analysis of New Zealand sea lion tracking data to estimate overlap with fisheries (Auckland Islands)	AEWG presentation of data characterisation				AEWG presentation of results			Final report provided to MPI											
PMM2018-09 Desktop estimation of pinniped cryptic mortality in trawls using SLEDs						AEWG presentation of operational model	SqOPTAG presentation/ discussion on model structure & initial inputs				SqOPTAG engagement		Final report on cryptic mortality multiplier (PMM2018-09)						
(PMM2018-10) Update Auckland Islands NZSL population model											SqOPTAG engagement		AEWG presentation of outputs & PST calculations						

- Next meeting of Technical Advisory Group planned for November

Planned research (Auckland Islands)

PMM 2018-09: Desktop estimation of cryptic mortality in trawls using SLEDs

- Summarise and integrate existing data to estimate cryptic mortality of sea lions in trawls using SLEDs with explicit estimation of uncertainty
- Regular engagement with Aquatic Environment Working Group and Squid 6T Operational Plan Technical Advisory Group
- Timed to inform development of 2019/20 Squid 6T Operational Plan

PMM 2018-10: Update of the Auckland Islands NZ sea lion demographic population model

- Incorporate all available data, including 2019 field season (pup count and mark-resight data)
- Timed to inform development of 2019/20 Squid 6T Operational Plan
- Provides monitoring tool for Auckland Islands sea lion population



Planned research (Other areas)

PMM2018-04B: Estimate spatial distributions for at-risk marine mammals to assess potential fisheries overlap and risk: Mainland and Stewart Island NZ sea lions

- Similar to PRO2017-10 but aimed at understanding potential overlap of Mainland and Stewart Island sea lions
- Estimate risk from fisheries to Mainland and Stewart Island sea lions



Other fisheries work planned for 2018/19

- Updating Operational Plan for Campbell Island southern blue whiting (SBW6I)
 - 100% Observer coverage
 - Deployment of SLEDs
- Development of Operational Plan for Auckland Islands scampi

