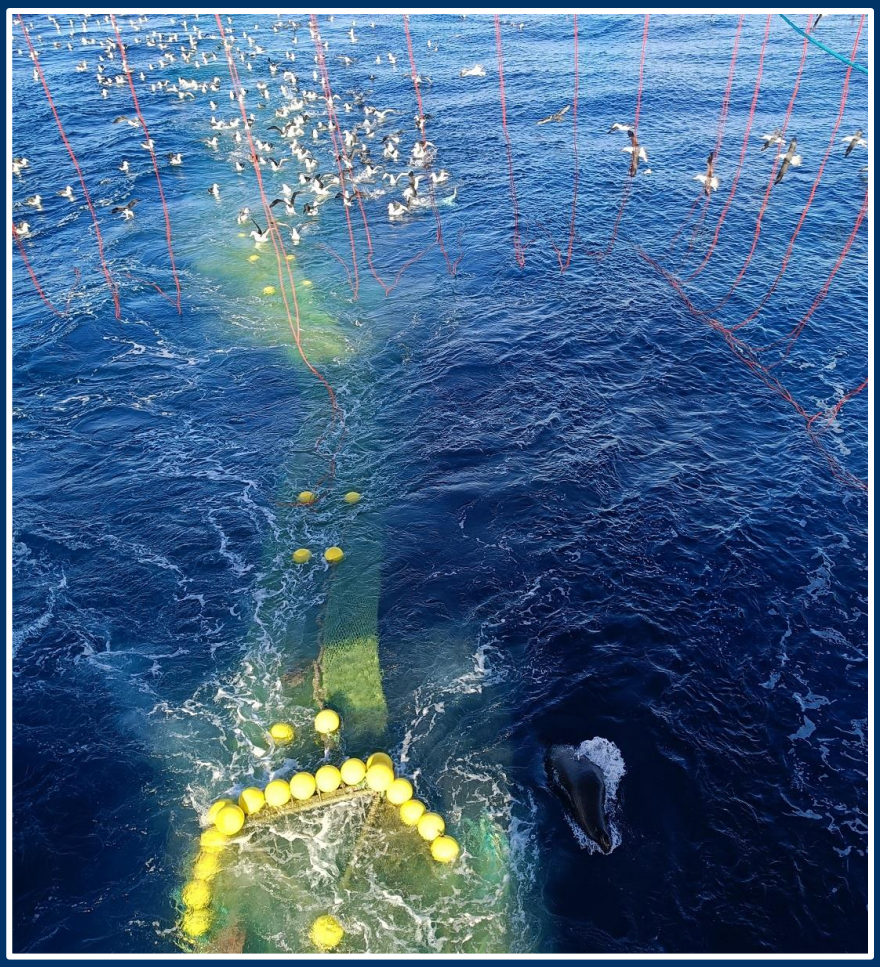
LOL 2025-X MMO Monitoring Program Report



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LOL 2025-X

Participating/Contributing Scientific Staff

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8 pp.

Previous related reports:

Iriarte, V. (2025). LOL 2025-C MMO Monitoring Report. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 9 pp.

Iriarte, V. (2025). LOL 2024-C MMO Monitoring Report. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 9 pp.

Iriarte, V. (2023). LOL 2023-X MMO Monitoring Report. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 7 pp.

Iriarte, V. (2023). LOL 2023-C MMO Monitoring Report. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 13 pp.

Iriarte, V. (2023). LOL 2022-X MMO Monitoring Report. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 14 pp.

Iriarte, V. (2022). LOL 2022-C MMO Monitoring Report. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 19 pp.

Contents

1. Introduction

This report presents the data regarding seabird and marine mammal interactions with the Patagonian longfin squid (*Doryteuthis gahi*, hereafter LOL) fishery, collected by the marine mammal observers (MMO) during the 2025-X season. For a description of the MMO Monitoring Program, MMO duties and sampling protocols, see report 2022-C.

The LOL 2025-X season started on 27 July 2025, with eight vessels with an MMO aboard, SEDs being mandatory for the whole fleet. Following several tentative fishery closures, MMOs remained deployed on the same vessels for the duration of the season.

The MMOs were supplied by MRAG (UK) and as part of a general training provided by the Falkland Islands Fisheries Department (FIFD), were briefed on seabird and marine mammal data collection by the Bycatch Mitigation Officer.

2. Results

2.1 Manoeuvre monitoring

Of 2,414 trawls carried out in the season, 1,233 (51%) were performed with an MMO aboard. These included the monitoring of 1222 shoots (50.6%) and 1226 hauls (50.7%). Of the shoots carried out with an MMO aboard, 567 (46%) were observed from the gantry, 607 (52%) from the bridge/bridge wings, 16 (1%) from the stern deck, while 11 (1%) were not observed (Fig.1). Regarding the hauls, 589 (48%) were observed from the gantry, 607 (49%) from the bridge/bridge wings, 30 (2%) from the stern deck, while 7 (1%) were not observed (Fig.1).

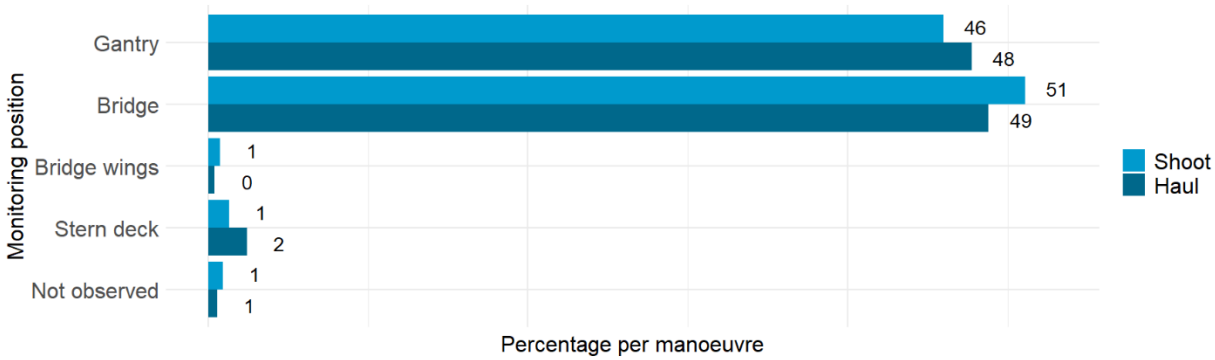

Fig.1. MMO observation effort.

Seventy percent of the MMO monitored fishing effort took place south of 52° S and 30% north (Fig.2). XVAL was the most visited grid square (213 shoots; 216 hauls), followed by XUAL (218 shoots; 188 hauls), XVAK (141 shoots; 149 hauls), XQAP (129 shoots; 111 hauls) and XSAN (108 shoots; 123 hauls) (Fig.3).

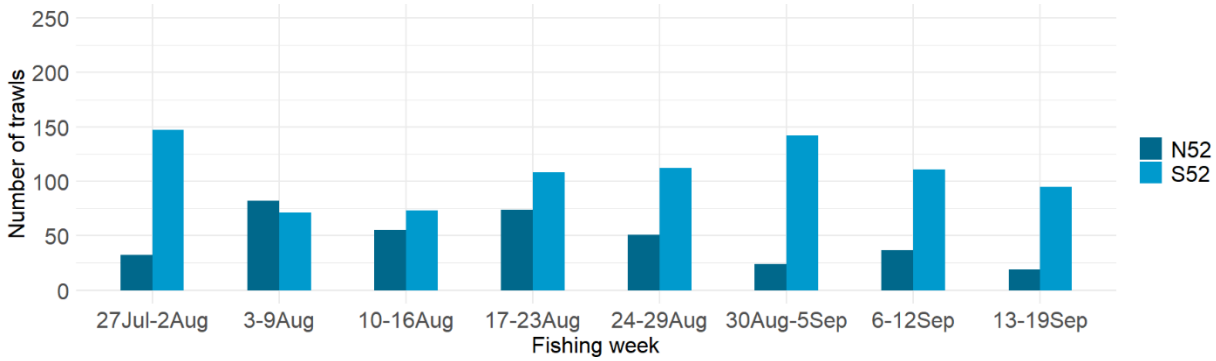

Fig.2. Observed fishing effort north and south of parallel 52°S.

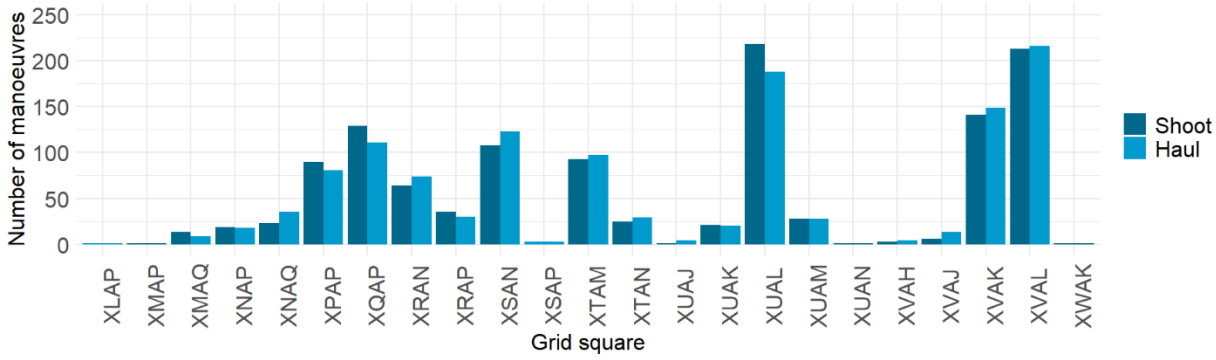

Fig.3. Observed fishing effort per grid square.

2.2. Pinniped sightings

A total of 262 seals [203 South American fur seals (*Arctocephalus australis*, hereafter ARA), 47 South American sea lions (*Otaria flavescens*, hereafter OTB), 12 unknown species (UN)] attended the monitored fishing operations. Eighty-two percent of the sightings were recorded south of 52º S (Table 1), particularly in grid squares XUAL (22%), XVAK (13%), XSAN (13%) (Fig.4), with ARA representing 77.4% of the sightings in the whole fishing area (Table 1). Observed pinnipeds peaked between the seventh (30Aug-5Sept) and eighth fishing weeks (6-12 September) (Fig.5).

2.2.1 Pinniped attendance to vessels and behaviour

In 84% of the hauling attendance, seal behaviour was related to foraging, with both ARA and OTB targeting unmeshed squid around the fishing gear (76%) or directly eating from it (8%) (Fig.6).

Table 1. Observed marine mammal interactions per region**.**

Region	Species	N° sighted	SED escapes	Deck releases	Mortalities
North 52° S	OTB	15	0	0	0
	ARA	28	0	0	0
	UN	4	0	0	0
Sub-total north		47	0	0	0
South 52° S	OTB	32	0	0	0
	ARA	175		0	1*
	UN	8	0	0	0
	LAU**	NA	0	0	1
Sub-total south		215	0	0	0
TOTAL		**262**	**0**	**0**	**1**

*Carcass in advanced decomposition
**Lagenorhynchus australis* (Peale's dolphin)

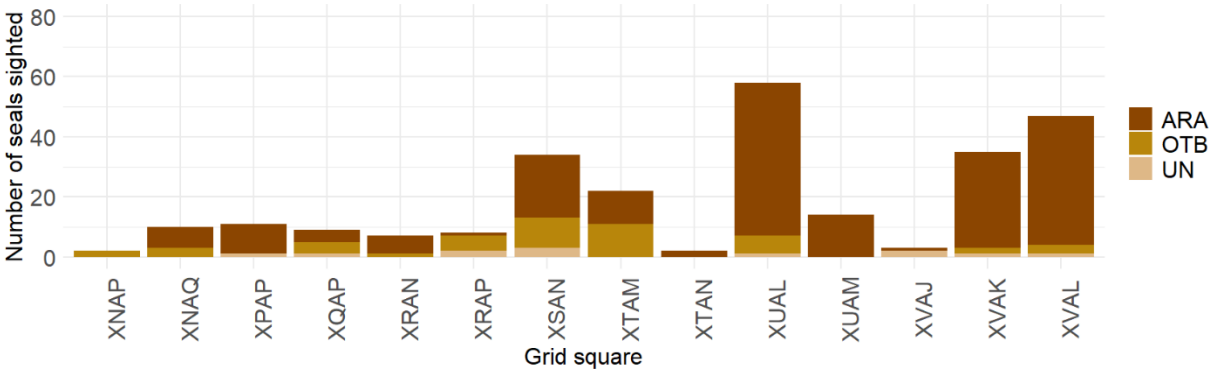

Fig.4. Observed pinniped attendance per grid square.

In the remaining vessel manoeuvres, the most common pinniped behaviour was to swim astern the vessel (unknow if the pinniped is foraging) (38%), follow the vessel (approaching and keeping pace with the vessel) (35%), and forage around the vessel (12%) (Fig.7). Observers may also record no interaction, when an animal is either more than 200 m distant from the vessel, or in transit, without seen engaging with a vessel manoeuvre (Fig.7).

2.2.2 Marine mammal bycatch

Throughout the season neither pinniped SED escapes nor deck releases were observed. Marine mammal mortality recorded by the MMOs comprised of two recovered carcasses, of which one corresponded to a fresh 176 cm male Peale's dolphin (*Lagenorhynchus australis*, LAU) (Table 1, Fig.8) and one to an ARA in advanced stage of decomposition (Table 1). Following FIG's rules for zoonotic avian influenza (H5N1) and the prohibition to collect marine mammal samples aboard fishing vessels, the LAU carcass was not preserved for

posterior necropsy. This particular trawl had a duration of 12.41 h and included four turns in grid squares XVAL and XUAL.

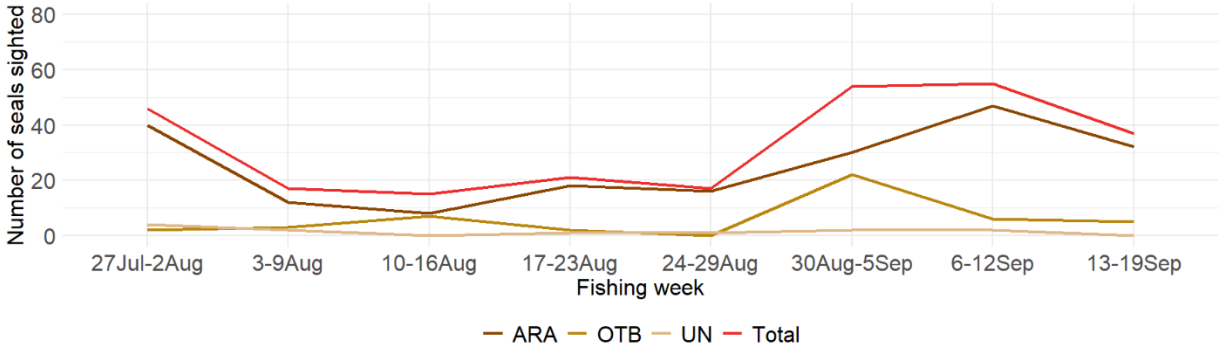

Fig.5. Cumulative pinniped sightings in monitored trawls per fishing week.

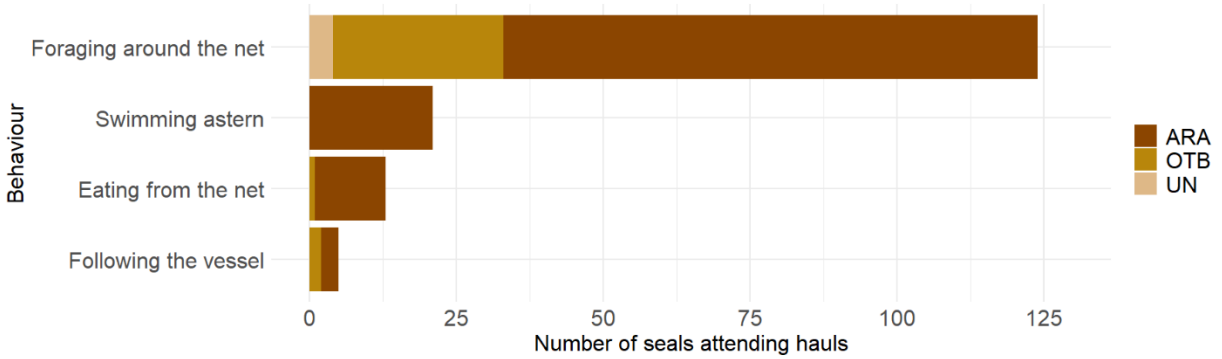

Fig.6. Pinniped abundance and behaviour exhibited during observed hauls.

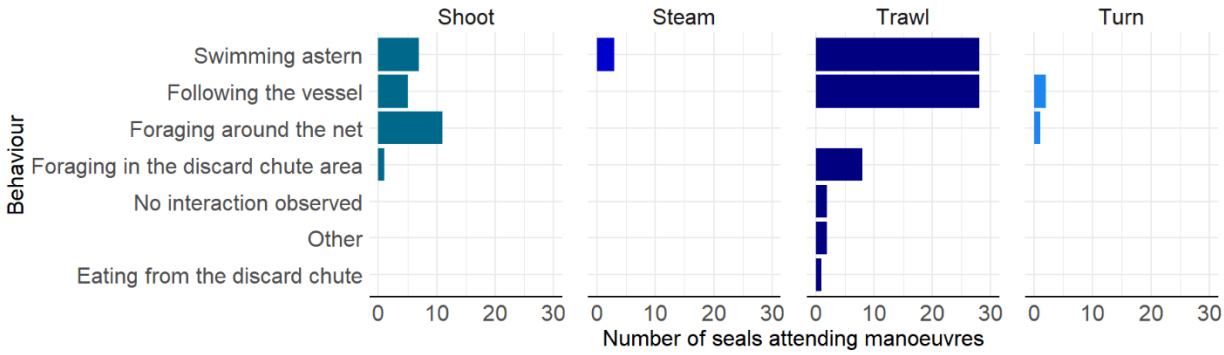

Fig.7. Pinniped abundance and behaviour exhibited during manoeuvres.

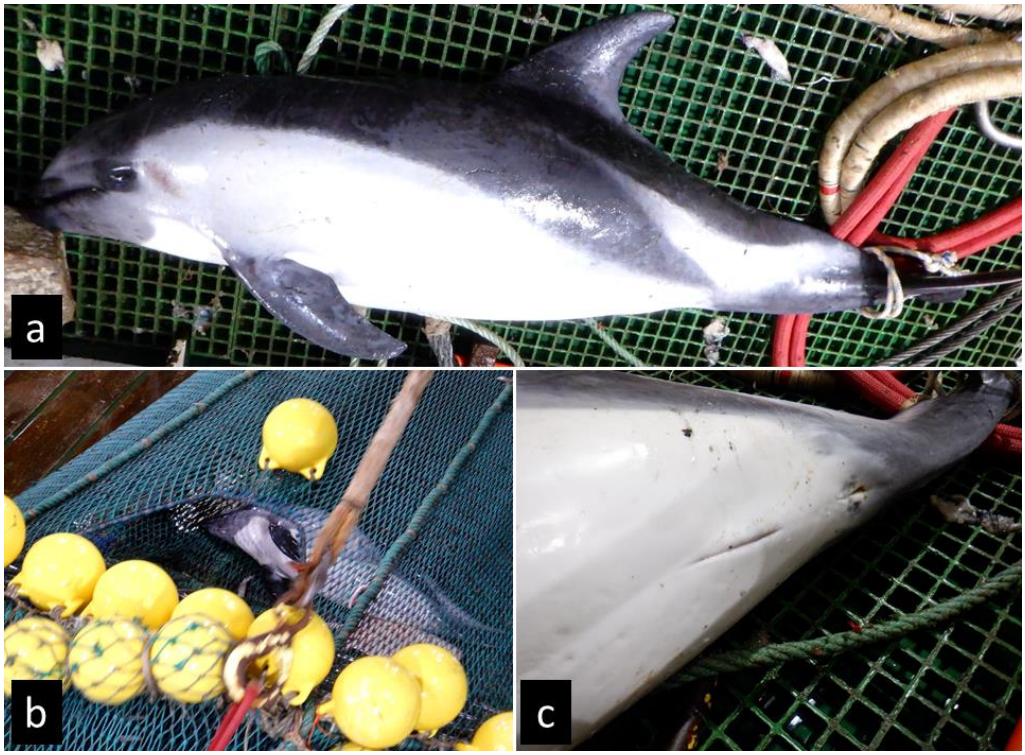

Fig.8. Peale's dolphin incidental mortality. Left lateral view (a), top view of the carcass inside the SED (b), and close view of the genitalia (c). Photos taken by the MMO.

2.3 Seabird bycatch

Two black-browed albatross (*Thalassarche melanophris*/DIM) net entanglements were recorded by the observers during two hauls performed on 19 August. The first one was a live-released individual which had entangled in 200 mm mesh on the net wings (XTAM), while the second was a mortality after entangling in 120 mm mesh on the body of the trawl (XVAL). Following FIG's rules for zoonotic avian influenza (H5N1) and the prohibition to collect seabird samples aboard fishing vessels, the DIM carcass was not preserved for posterior necropsy.

3. Conclusions

3.2. 2025-X is the third fishing season in which MMO coverage was reduced to 50%.

3.3. Contrasted to previous X seasons since 2017, the number of both seals and seabird interactions fell sharply.

3.4. The previous could be related to both intrinsic characteristics of the fishing season and the low MMO effort from the gantry.

3.5. For the first time since 2017, an observer recorded a dolphin incidental mortality in the fishery. This also comprised the first LAU incidental mortality reported in a trawl fishery in the Southwestern Atlantic.

3.6. In order to avoid both cetacean and pinniped mortalities, during second seasons the performance of turns in the south of the fishing area should be replaced by consecutive shorter trawls (Iriarte and Winter, 2025).

3.7. To ensure scientific data collection and its quality, it necessary to re-establish fluid communication with MMOs to increase motivation, build trust, and confirm actions to take with FIFD's Observer Manager/Bycatch Mitigation Officer.

3.8. FIG should allow flexibility in the collection of biological samples to avoid the loss of invaluable information crucial to inform fishery management.