



SIOFA | APSOI

Southern Indian Ocean Fisheries Agreement
Accord relatif aux Pêches dans le Sud de l'Océan Indien

SC-08-INFO-09

8th Meeting of the Scientific Committee (SC8)

Tenerife, Spain, 22-31 March 2023

SC-08-INFO-09

Report on interaction with mammals

SIOFA Secretariat

Document type	working paper <input type="checkbox"/> information paper <input checked="" type="checkbox"/>
Distribution	Public <input checked="" type="checkbox"/> Restricted ¹ <input type="checkbox"/> Closed session document ² <input type="checkbox"/>
Abstract	
Report of mammal interaction, in accordance with CMM 2022/02	

¹ Restricted documents may contain confidential information. Please do not distribute restricted documents in any form without the explicit permission of the SIOFA Secretariat and the data owner(s)/provider(s).

² Documents available only to members invited to closed sessions.

1. Introduction

Since CMM 2021/02 has been adopted and entered in force in October 2021, a protocol to document mammal interaction applies to CCP when fishing with longline in the SIOFA Area. The specific data requirement of this protocol is developed in the annex E of the CMM (This annex is also provided as Annex A of this document). Note that CMM 2022/02 supersede CMM 2021/02 since October 2022.

In 2022, Two CCPs provided information in relation to this protocol. The information is summarized in this document.

2. Data and Method

2.1. Data used

The information about interaction with mammals are recorded in the observer databases and come from the annual data submission made by SIOFA CCPs.

Data in relation to mammal interactions has been extracted and a dataset generated for analysis.

The field used are:

- Year
- Month
- CCP
- fishing operation (hauling)
- Gear (demersal longline)
- SIOFA subarea
- Presence
- Photos
- Numbers (min and max)
- Interaction with fishing gear
- Estimated time of arrival

2.2. Method

The data is presented in simple tables. Table 1 summarizes the presence or absence, Table 2 summarizes the species; number and if photo have been taken, table 3 summarizes the interaction with fishing gears.

3. Results

All presences of mammals have only been recorded in SIOFA Subarea 3b, and especially in the Del Cano Rise area.

Table 1: Summary of operations observed and recording of presence or absence of mammal.

Year	Month	Total number of operations	Operations observed?		Presence or absence of mammals		
			No	Yes	Absence	Presence	Unknown
2021	2	80	4	76	58	17	5
2021	5	30	2	28	14	3	13
2021	10	12	5	7	7		5
2021	11	95	51	44	42	6	47
2021	12	74	50	24	37	16	21
2022	1	36	15	21	25	7	4
2022	2	23	3	20	23		

When mammal presences have been observed, the next table illustrates which species could have been identified and in which number, and if photos could have been made.

Table 2: Summary of species identified, number observed, and photos taken.

Year	Month	Occurrences	Species Code	Min Number	Max Number	Photos occurrences
2021	2	15	KIW	2	15	7
2021	5	3	SPW	1	4	0
2021	11	5	SPW	1	2	0
2021	12	6	SPW	1	3	0
2022	1	1	SPW	2	3	0

The last table summarize the interactions with gear and when the animal arrived after the fishing operation started

Table 3: Summary of the number of interactions with gears and estimated time of arrival of the mammal near the vessel

Year	Month	Interaction with gear	ETA
2021	2	12 times	Not available
2021	5	Not available	Reported 3 times: 0', 20', 60'

4. Conclusion

The CMM requirement to record mammal interactions has only been in force since 2021, therefore the SIOFA database contain few data records.

Priority 1 information is generally well provisioned. For Priority 2 and priority 3, it is better to provide NIL information instead of blanks (e.g., it is better to report that no photos have been taken for an operation, than to leave the data cell blank or empty).

The SC is welcomed to suggest better reporting format for such information, as long as it is in accordance with the data requested in CMM 2022/02 annex E.

ANNEX A

Protocol for documenting whale interaction in deep-sea demersal longline fisheries

Priority 1 Data to be collected**Presence**

For every haul and for each species:

Haul	Presence ?	Comment
1	Absent	
2	Present	
3	Present	Night-time, but clearly see them in projectors
4	Not observed	Night-time, can't see them but can't say they are not present around.

Requirement: data mandatory and must be collected for every haul.

“Presence”: Favourable conditions (visibility is at least several hundred meters with sufficient light) and observation by the observer (observer can be alerted by the crew when whales are sighted). The presence of whales is confirmed by direct observation of at least one individual at the surface in the vicinity of the vessel at least once during 1 haul. Note that presence can also be observed at night when killer whales come very close to the boat.

“Absence”: Favourable conditions and no odontocete spotted at any time during the entire haul.

“Not observed” is used either if the observer did not have time to gather information (e.g. if line broke), or if conditions are too bad to observe (either weather conditions, or hauling at night).

Photos

For every haul and for each species:

Haul	Presence?	Photos?	Comment
1	Absent	No	
2	Present	Yes	
3	Present	No	Night-time: too dark for pictures
4	Not observed	No	Night-time: too dark for pictures

Requirement: data mandatory and must be collected for every haul.

With this additional field, observers indicate whether they took pictures of whales for photo-identification purposes or not during the haul of the set.

Priority 2 Data to be collected

Number of individuals

For every haul and for each species:

Haul	Presence?	minimum	maximum	comment
1	Absent	0	0	
2	Present	15	22	
3	Present	1		At least one but too dark for accurate estimate
4	Not observed			

Requirement: data should be collected for every haul to the extent possible.

Providing exact counts of individuals from the surface may be difficult for observers as whales can dive for long periods of time. To account for uncertainty around counts, observers may fill in two fields:

- Minimum estimate of the number of individuals,
- Maximum estimate of the number of individuals.

Priority 3 Data to be collected**Interaction with fishing gear**

For every haul and for each species:

Haul	Presence?	Interaction with fishing gear?	Comment
1	Absent	No	
2	Present	Yes	Saw them diving close to the line
3	Present	Yes	Head of fish were observed
4	Not observed		

Requirement: data should be collected for every haul to the extent possible.

When Presence, interaction with fishing gear is taken into account if whales are diving close to the lines or directly observed with fish in their mouths.

Estimated Time of Arrival (ETA)

For every haul and for each species:

Haul	Presence?	ETA	Comment
1	Absent	NA	Not applicable
2	Present	0:30	We were able to haul 30 minutes before they arrive
3	Present	0:00	Saw them in projectors even before first hook came on board
4	Not observed	NA	Not applicable

Requirement: data should be collected for every haul to the extent possible.

The Estimated Time of Arrival here corresponds to the time between the first hook of the line hauled on board and the arrival of sperm whales / killer whales. If whales are already present when hauling starts, then ETA is zero.