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

SC-08-05

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Abstract	
<p>This report summarizes and updates fishing activity by French Territories flagged vessels authorized by the French Government to operate in the Southern Indian Ocean Fisheries Agreement (SIOFA) Area for 2022.</p> <p>This annual report includes the BFIA report, the VME report, the observer program implementation report, and the annual data verification report, according to the circular 2022-03 Annex A.</p> <p>The fishing activity has been very low in 2022, only one longliner vessel operated in the toothfish fishery subarea 3.b (Del cano management unit) during two cruises for a total of 18 days. No VME indicator thresholds were triggered during 2022.</p> <p>All data presented in this report will be submitted, in May 2023, to the SIOFA secretariat in accordance with CMM 2022/02. They comply with French domestic policy associated with the dissemination of fisheries data and this report does not disclose any non-public domain data within the meaning of SIOFA CMM 2016/03.</p>	

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Recommendations

It is recommended that the SC:

1. Notes the National Report provided by FR-OT.
2. Notes that the FR-OT has complied with the annual reporting requirements of the SIOFA Scientific Committee.
3. Notes that there has been no change in the fishing fleet and the fishing activities were very low during the previous calendar year. The BFIA does not need to be updated.

French Overseas Territory's Annual Reports 2022, SIOFA 8th Scientific Committee 2023

Chazeau C.¹, Pruvost P.¹, Selles J.¹

¹ Laboratoire de Biologie des Organismes et des Ecosystèmes Aquatiques (BOREA) – Muséum national d'Histoire naturelle, 43 rue Cuvier 75005 Paris, France.

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Introduction

This report summarises fishing activity by French Overseas Territories flagged vessels in the Southern Indian Ocean Fisheries Agreement (SIOFA) Area. French operators are currently authorised by the French Government to target various species with demersal lines and potting gears. In accordance with CMM 2021/02 (Conservation and Management Measure for the Collection, Reporting, Verification and Exchange of Data related to fishing activities in the Agreement Area) and previous superseded CMMs, French historical logbook data have been provided to the SIOFA Secretariat.

High seas fishing authorization in the SIOFA area are only deliverable to vessels that already hold a license issued by the Prefect, Administrator of the Terres Australes et Antarctiques Françaises (TAAF). Permits are granted for a one year period. Consistent with SIOFA CMM 2021/02, French high-seas fisheries permits require the implementation of vessel monitoring systems, 100% observer coverage for all operations.

Description of fisheries

In 2022, six vessels, from the Southern French Territories, were authorized by the French authorities to fish in the SIOFA area. The fleet includes 5 longliners and one trawler/potter vessel to target various species with pots, dropline, vertical longlines, automatic longlines and demersal longlines.

The size of vessels is from 55 to 77 meters. The port of registry is “Port-aux-Français”, Kerguelen Islands, (TAAF).

In 2022, there was no change in the fleet and the French Territories fishing activities in the SIOFA AREA with one active demersal longliner operating in the toothfish fishery subarea 3.b for 18 days during two cruises (Table 1)

Table 1: Active fleet composition (number of vessels by gear type and size and how this has changed by year) over the previous five years

Year	Vessels that actively fished	
	Longliner	Potter
2022	1	0
2021	1	0
2020	2	0
2019	1	0
2018	0	1

Catch, effort and CPUE summaries

Fishing effort

In 2022, there were 80 fishing operations (i.e 216 000 hooks set) over 18 days, all in Area 3b (Table 2.1), including:

- 43 longlines of 2 700 hooks set (i.e. a total of 116 100 hooks set) between 1116 and 1577 meters in 10 days.

- 37 longlines of 2 700 hooks set (i.e. a total of 99 900 hooks set) between 1115 and 1683 meters in 8 days.

Table 2.1: Summary table of longline effort by set (number of line) in the SIOFA areas, the absence of effort is noted ‘-’.

Year	Sub-areas for reporting effort data								
	1	2	3.a	3.b	4	5	6	7	8
2022	-	-	-	80	-	-	-	-	-
2021	-	-	-	54	-	-	-	-	-
2020	-	-	-	46	-	-	-	-	-
2019	-	-	-	40	-	-	-	-	-
2018	-	-	-	-	30*	-	-	-	-
2017	-	-	-	26	4	3	-	-	-
2016	-	-	-	-	12*	-	-	-	-
2015	-	-	-	66	-	-	-	-	-
2014	-	-	-	103	-	-	-	-	-
2013	-	-	-	126	-	-	-	-	-
2012	-	-	-	88	-	-	-	-	-
2011	-	-	-	80	-	-	-	-	-

Note: * vertical longline

Table 2.2: Summary table of trap effort by set (number of trap) in the SIOFA areas, the absence of effort is noted ‘-’.

Year	Sub-areas for reporting effort data								
	1	2	3.a	3.b	4	5	6	7	8
2022	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	50	-	-	-	-
2017	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	40	-	-	-	-
2015	-	-	-	20	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-

Catch

The main catches (Table 4) for the southern area are the Patagonian Toothfish (TOP), Macrourids (GRV) and *Antimora rostrata* (ANT). Catches include also some *Amblyraja taaf* (RFA) and *Etmopterus sp.* (ETF) and some other species with low catches.

The catches are mainly made with demersal longlines (Table 3.1). Catches with traps and vertical longlines remain very low (Table 3.2).

Table 3.1: Summary table of demersal longline total catches in kilograms, in the SIOFA areas, the absence of catches is noted ‘-’

Year	Sub-areas for reporting catch data								
	1	2	3.a	3.b	4	5	6	7	8
2022	-	-	-	29372	-	-	-	-	-
2021	-	-	-	13181	-	-	-	-	-
2020	-	-	-	15175	-	-	-	-	-
2019	-	-	-	29083	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2017	-	-	-	25149	282	538	-	-	-
2016	-	-	-	-	-	-	-	-	-
2015	-	-	-	70521	-	-	-	-	-
2014	-	-	-	66765	-	-	-	-	-
2013	-	-	-	84620	-	-	-	-	-
2012	-	-	-	48427	-	-	-	-	-
2011	-	-	-	69990	-	-	-	-	-

Table 3.2: Summary table of trap and vertical longline total catches in kilograms in the SIOFA areas, the absence of catches is noted ‘-’

Year	Sub-areas for reporting catch data								
	1	2	3.a	3.b	4	5	6	7	8
2022	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	402,47	-	-	-	-
2017	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	97,9	-	-	-	-
2015	-	-	-	2,6	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-

Table 4: Longline catch (kg) by species for the main target, bycatch, associated and depended species (R-retained and D-discarded) in the SIOFA areas, the absence of catches is noted ‘-’

Year	<i>Dissostichus eleginoides</i>		<i>Macrourus sp</i>		<i>Antimora rostrata</i>		<i>Amblyraja taaf</i>		<i>Etmopterus sp</i>		Total	
	R	D	R	D	R	D	R	D	R	D	R	D
2022	11 566	41	4 303	2 260	-	11 062	110	29	-	2	15 979	13 393
2021	4 497	-	497	833	-	7 344	-	10	-	-	4 994	8 187
2020	5 210	10	1 132	1 220	-	7 486	-	117	-	-	6 342	8 833
2019	9 618	20	5 103	3 607	21	10 192	19	502	-	2	14 761	14 323
2018	-	-	-	-	-	-	-	-	-	-	-	-
2017	7 610	-	5 020	2 656	-	9 500	-	361	-	469	12 630	12 986
2016	-	-	-	-	-	-	-	-	-	-	-	-
2015	17 200	60	12 300	6 700	-	33 800	-	400	-	1	29 500	40 961
2014	13 500	-	7 700	3 800	-	37 600	-	3 900	-	561	21 200	45 861
2013	16 000	-	13 000	5 600	-	44 200	-	-	-	582	29 000	50 382
2012	17 700	-	3 900	2 600	1	10 900	-	-	-	-	21 601	13 500
2011	22 100	-	8 800	3 500	-	28 000	-	-	-	167	30 900	31 667

Fishery data collection and research activities

All the licensed French Territories vessels have on-board a fishing observer to cover 100% of the fishing activities. The task list is described in (WHSOP1-INFO-06-French-Observer-program, Annexe 03: OBSERVER PROGRAM'S TASK LIST). The data collection occurs at two different levels:

- Skipper level: have to collect all detailed information on fishing events and catches.
- Observer level: independently, fishery observers (covering 100% of gear deployment) collect data on a fourth of the set to monitor catches.

All data are registered on board in a digital logbook and transferred to the MNHN fishing database "PECHEKER".

Table 5: Details on the scales and resolutions of the fishery data collection

	longliner data collection items			
Year	tow / set <i>(individual or some aggregation)</i>	time scale <i>(set-tow hauling time, daily, etc.)</i>	spatial scale <i>(tow/set exact position or grid, please provide grid resolution)</i>	species details <i>(any aggregation or species grouping)</i>
2011-2022	Individual (set by set)	set hauling time	set exact position	species level

VME Thresholds report

The crew must collect and retain all benthic organisms for each segment in numbered buckets, those buckets will be made available for observers. The observers record benthic organisms composition and abundance for each set (Table 8). This information is also recorded in a digital logbook and transferred to the MNHN fishing database "PECHEKER".

No VME indicator thresholds were triggered for the period 2011-2022 (Table 6). The move-on protocol didn't need to be applied.

No interactions with threatened, endangered and protected species were reported in 2022 (Table 7).

Table 6: Threshold levels for encounters with VMEs and move-on protocols for the period 2011-2022

Gear/fishery	Threshold (kgs)	Move-on protocols
Longline	0	None apply

Table 7: Summary VME Taxa (wet) weight (kg), operations exceeding thresholds and effort in the SIOFA areas, the absence of VME catches is noted '-', the absence of thresholds is noted 0.

Year	Unit	Sub-areas for reporting catch and effort data								
		1	2	3.a	3.b	4	5	6	7	8
Year 2011-2022	Weight (kg)	-	-	-	0	0	0	-	-	-
	N° Operations	-	-	-	0	0	0	-	-	-
	Effort (Tables 2.1..)	-	-	-	0	0	0	-	-	-

Table 8: VME taxa bycatch quantities per gear from logbooks data. Total set number represents the number of set with VME taxa encountered. NA : no data due to inability to measure.

	2022	longline/trip 1
	total set number	10
taxa	AQZ (litre)	0,01
	ATX (litre)	NA
	BCD (litre)	NA
	CNI (litre)	0,25
	ECH (litre)	0,01
	GGW (litre)	NA
	NTW (litre)	0,95
	OOY (litre)	0,07
	PFR (litre)	NA
	SSX (litre)	NA

	2022	longline/trip 2
	total set number	24
taxa	AJZ (kg)	0,1
	AQZ (kg)	0,3
	ATX (kg)	NA
	BCD (kg)	NA
	CNI (kg)	0,1
	GGW (kg)	0,1
	HXY (kg)	0,36
	NTW (kg)	0,1
	PFR (kg)	0,4
	SPO (kg)	0,03

Summary report of observer and port sampling programs

Port sampling program

In order to keep track of the catch: species and area where the fish were caught are reported on every single box containing the fish to be landed for commercial purposes. An independent company of experts based in La Réunion island is tasked to weigh a second time (the first time being on the factory of the ship at sea) all the fish boxes and report the exact weight for each combination of area, species and product. Those data are then used to correct the weights collected at sea. For Patagonian toothfish, an official DCD (Dissostichus Catch Document) from CCAMLR is produced at the scale of each trip and contains all needed information on species, products and areas including SIOFA.

Observer program implementation report

The FR-OT observer program is described in info-paper WHSOP1-INFO-06-French-Observer-program. This document describes the French observer program, as updated in October 2021 according to the SIOFA CMM. This report includes summary sections covering: observer training, program design and coverage, type of data collected. During the previous calendar year, no problems were encountered in the observer program implementation.

All the data collected by the observer program are provided to the secretariat as per CMM 2022-02. The observation programme follows the guidelines in Annex 4, on 'Function and tasks of the scientific observer' and Annex 5, on 'Protocol for documenting whale interaction in deep-sea demersal longline fisheries'.

Table 9: Observer program design and coverage summary table for period 2011-2022

	trips	total no of	no of	within	incidental
	coverage of	sets/hauls	sets/hauls	set/haul	bycatch
	(%)		covered	coverage	(bird,
				(%)	mammal)
longliner	100			100	observation
					coverage
					(% by
					set/haul)
					25 % for
					bird
					100 % for
					mammal

Table 10: Reporting of observed bycatch number

bycatch	Longline 2022	Longline 2021	Longline 2020	Longline 2019	Longline 2018	Longline 2017	Longline 2016	Longline 2015	Longline 2014	Longline 2013	Longline 2012	Longline 2011
seabird	0	0	0	0	0	0	0	0	0	0	0	0
mammal	0	0	0	0	0	0	0	0	0	0	0	0
sharks (not retained)	5	0	0	4	0	462	0	2	853	372	0	314
VME taxon 1 (unit)	*	*	*	*	*	*	*	*	*	*	*	*
VME taxon 2 (unit)	*	*	*	*	*	*	*	*	*	*	*	*
other												

Note: * VME taxon Unit are under VME threshold, the data are transmitted to the secretariat in the annual data template.

Biological sampling and length/age composition of catches

Since the beginning, biological and size composition sampling by species are conducted by scientific observers on board the FR-OT vessels.

Table 11: Summary numbers of fish sampled* per species and year

	Years				
Species (FAO code)	2018	2019	2020	2021	2022
TOP	L/F: 0 BS: 0	L/F: 358 BS: 0	L/F: 245 BS: 10	L/F: 184 BS: 32	L/F: 558 BS: 32
GRV	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 351 BS: 5	L/F: 72 BS: 3	L/F: 217 BS: 1
ANT	L/F: 0 BS: 0	L/F: 79 BS: 0	L/F: 399 BS: 5	L/F: 232 BS: 3	L/F: 280 BS: 1
RFA	L/F: 0 BS: 0	L/F: 38 BS: 0	L/F: 218 BS: 0	L/F: 326 BS: 0	L/F: 41 BS: 0
SDC	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 3 BS: 0	L/F: 0 BS: 1	L/F: 1 BS: 2
CZF	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 1
LEV	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 5	L/F: 0 BS: 0	L/F: 0 BS: 2
CVY	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 16 BS: 6	L/F: 0 BS: 0	L/F: 0 BS: 0
SRX	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 1 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0

BXD	L/F: 1 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0
CHZ	L/F: 18 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0
ROK	L/F: 27 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0
WHA	L/F: 3 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0
WRF	L/F: 24 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0	L/F: 0 BS: 0

* For L/F: length/frequency counts, BS: for complete individual biological sampling

Table 12 below shows the length frequency information of the species in 2022 when more than 100 specimens have been sampled. Information about sex and maturity is also available.

Table 12.: Length frequency information by species, number and total length (cm) min, max and mean in 2022

Species (FAO code)	Num	Min	Max	Mean
TOP	558	40,0	127,0	71,4
GRV	217	41,0	89,5	59,8
ANT	280	38,6	68,2	54,6

Annual data verification report and description of data verification mechanisms

All the data verification mechanisms are conducted according to the SIOFA CMM and described in the French BFIA 2018 (SC-03-03(06)) and in info-paper WHSOP1-INFO-06-French-Observer-program.

Position verification through VMS is used by French administration

The captain and the fishing observer computerize all the data in a digital logbook and send a weekly report.

Data about vessel trip, landing and port sampling are transferred to the administration and the SIOFA secretariat as requested in the CMM.

The fishing observer sends on a weekly-basis the dataset for verification to the MNHN team.

During the previous calendar year, no problems were encountered in the data verification.

BFIA report

The FR-OT Bottom Fishing Impact assessment has been described in a Working Paper in 2018 (SC-03-03(06)). There has been no change in the fishing fleet and the fishing activities were very low during the previous calendar year. The BFIA does not need to be updated.

The landing and transshipment report is sent to MNHN from the port sampling at the end of the cruise.

Annex I: Sub-areas for reporting catch and effort data.

Table 1

	Area	Lats		Longs	
		NS		E	
1	Mozambique Ridge	S 20°	S 36°	-	40°
2	Madagascar Ridge	S 20°	S 36°	40°	49°
3a	Northern SW Indian Ridge	S 20°	S 36°	49°	65°
3b	Southern SW Indian Ridge	S 36°	S 45°	30°	65°
6	Mid-Indian Ridge	S 20°	S 45°	65°	80°
4	Ninety Degree East Ridge	S 20°	S 36°	80°	90°
5	Broken Ridge	S 25°	S 36°	90°	105°
7	SE Indian Ocean	S 20°	S 55°	80°	120°
8	North of 20°	N 10°	S 20°	-	80°

² Source for Table 1 and Figure 1: Guidelines for submission of annual national reports Rev3.docx

Figure 1

