

### 10<sup>th</sup> Annual Meeting of the Scientific Committee (SC10)

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#### SC-10-08

## **Annual National Report**

Republic of Mauritius

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Abstract	
carried out by industhe SIOFA Area. Sin	n fishing on the SIOFA Sub Area 8, on the Saya de Malha Bank. Fishing has been strial and semi-industrial vessels. As from 2022. no industrial vessels operated in ice 2024, one Mauritian vessel is operating as mid-water trawler and four vessels dline fishing in the SIOFA CA. This report summarises the fishing activities for the

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### Recommendations

The Delegation of Mauritius recommends that the SC10:

- notes the national report provided by the Republic of Mauritius
- **notes** that the Republic of Mauritius has complied with the annual reporting requirements of the SIOFA Scientific Committee

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# 1. Mauritian Fisheries on the Southern Indian Ocean Fisheries Agreement (SIOFA) Area.

Mauritius carries out different fishing activities in the SIOFA Agreement Area, namely on the Saya de Malha Bank (SIOFA Sub Area 8) using line gear and on SIOFA Sub Areas 2, 3a and 3b using mid water trawl. The different fisheries targeting demersal species are:

- a) the Industrial Shallow Water Banks Fishery;
- b) the Semi-Industrial Shallow Water Banks Fishery; and
- c) the Semi-Industrial Deepwater snapper/grouper fishery.
- d) the Trawl Fisheries

All the fisheries differ with respect to fishing methods, species targeted, catch and vessel/boat size (LOA).

### 2. Description of the fisheries

### Fleet composition

In 2022, the Mauritian fleet was composed of three fishing semi-industrial vessels. All three operated in the semi-industrial deepwater snapper/grouperfishery and two of them <u>also</u> operated in the semi-industrial shallow water banks fishery. No fishing vessel from the 'Industrial shallow water fishery' operated on the Saya de Malha Bank (SIOFA Sub Area 8).

In 2023, the Mauritian fleet did not change. The fleet comprised a total of three vessels operating on the Saya de Malha Bank (SIOFA Sub Area 8). All three operated in the Semi-Industrial Deepwater snapper/grouper fishery, and two of them <u>also</u> operated in the Semi-Industrial shallow water banks fishery.

In 2024, the Mauritian fleet consisted a total of five (5) fishing vessels active on the SIOFA CA. The details of their fishing operations were as follows;

- a) Four (4) fishing vessels operated on the Saya de Malha Bank (SIOFA Sub Area 8): 2 in semi-industrial shallow water banks fishery only, one in the semi-industrial deepwater snapper/grouper fishery only; and 1 in both fisheries; and
- b) One (1) new vessel joined the fleet and carried out midwater trawling in SIOFA Sub Areas 2, 3a and 3b.

Details are put in Table 1.

Table 1 - Number of active vessels by fishery (Source: Ministry of Agro-

Industry, Food Security, Blue Economy and Fisheries)

				Year	•	
Type of vessel	2020	2021	2022	2023		2024
Industrial shallow water vessels	1	1	Nil	Nil		Nil
Semi- industrial shallow water bank vessels	(1) (it also operated in the Semi-industrial deepwater fishery)	1	(2) (also operated in the Semiindustrial deepwater fishery)	(2) (also operated in the Semiindustrial deepwater fishery)	1	One (1) vessel also operated in both the Semi-Industrial Shallow Water Banks Fishery and Semi-
Semi- industrial deepwater vessels	5	2	3	3	2	Industrial Deepwater snapper/grouper fishery)
Mid water trawl vessel	Nil	Nil	Nil	Nil		1
Total	6	4	3	3		5

### The Industrial Shallow Water Banks Fishery

The industrial shallow water bank fishery is practised using handlines in a "mothership-dory" system. A "mothership" vessel (around 45 to 50 m in length) takes between 45 to 60 days for a fishing trip, and may perform three to four trips annually. The mother vessel carries 15 to 20 glass fiber dories (pirogues), which are launched at sea when the vessel reaches the fishing grounds. Fishing is done at a depth of about 20-50m within a range of 6 km from the mother vessel. The dories return to the mother vessel either at midday or evening with the day's catch. The catch is gutted and gilled at sea on the way back to the mother vessel. Upon arrival, the catch for the day is weighed, rinsed with sea water, blast frozen at -20°C and the next day, stored in bags or in bulk in the fish hold on board the vessel. About 80-90% of the banks' fishery catch consists of white fish (emperors): the main species being Lethrinus mahsena, and other lethrinids. The rest mainly comprises serranids (Annex 1).

It is to be noted that as from 2022 no fishing vessel from the Industrial Shallow Water Banks Fishery fished on Saya de Malha – SIOFA Sub Area 8.

### 2.2 The Semi-Industrial Shallow Water Banks Fish Fishery

In this fishery, the fishing boats are of length ranging between 12m and 24m. Fishing is practised using handlines. The boats carry ice and fishing gears, and once on the fishing grounds, fishing is carried out from the deck. When the fish is caught, it is placed in a slurry containing ice and sea water. At the end of the fishing day, all the fishes are put in the fish hold. Fish in the fish hold is kept on layers of ice in racks in the ratio of 1 kg of fish to 2 kgs of ice. Each fishing campaign lasts for about ten days and the catch is unloaded chilled for retail distribution in the island.

The main targeted species of this fishery are the white fish lethrinids, mainly Lethrinus mahsena and other species, namely 'red fish' (Plectropomus spp, Variola spp), Aprion virescens (Annex 1). In 2024, two (2) fishing boats operated on the Saya de Malha SIOFA Sub Area 8

### 2.3 The Semi-Industrial Deepwater snapper and grouper fishery

Deepwater snappers/groupers are present at depth of 150-300m on the slopes of the banks. The deepwater snapper and grouper fishery is mainly practised on the drop-offs (slopes) of the fishing banks by fishing boats of length range from 12m to 24 m. The main species caught are: Snappers (*Etelis* spp., *Pristipomoides* spp.), Frenchman seabream (*Polysteganus baissaci*) and comet grouper (*Epinephelus morrhua*). Fishing is carried out from the deck of the fishing boats using hydraulic reels mounted with nylon lines and hooks. Bait is mainly frozen tuna and cuttlefish.

Three (3) fishing boats operated on the Saya de Malha SIOFA Sub Area 8 in 2024.

### 2.4 The Trawl Fishery

The Mauritian vessel, 'Klondyke 139' is listed in the SIOFA Record of Authorised Vessels and is operating as mid water trawler in the SIOFA Convention Area since May 2024. The overall length of the vessel is 54.55 m. The vessel operated in sub-area 2. 3a & 3b and undertook two trips in 2024. The total catch unloaded amounted to 90.7 tonnes and comprised alfonsino as the main target species.

### **3.** Catch, effort and Catch per Unit Effort (CPUE)

The catch, effort and CPUE details (for the last 4 years) are in Tables 2-7, for the Industrial Shallow Water Bank Fishery, the Semi-Industrial Shallow Water Banks Fishery, the Semi-Industrial Deepwater Snapper and Grouper Fishery and Trawl fishery. Data was compiled as per logbooks received from fishing vessels/boats. Given that handline gear is highly selective, the volume of discards is negligible.

### **Effort**

For the Mauritian bank fishing vessels, effort is measured as fishermen days.

Mauritian fisheries are essentially line fisheries, where the lines are operated by hand (industrial and semi-industrial shallow water vessels) or by a hydraulic reel (semi-industrial deepwater vessels). One fishing vessel started activities in 2024 and uses midwater trawl to target demersal species.

In 2022, the total effort of the Mauritian fleet was 1,551 fishermen days, from 12 fishing trips: No fishing effort from the industrial shallow water fishery vessels, 573 fishermen days from the semi-industrial shallow water fishery and 978 fishermen days from the semi-industrial deepwater snapper and grouper fishery.

In 2023, the total effort of the Mauritian fleet amounted to 2 338 fishermendays, from the semi-industrial shallow water fishery (1 803 fishermendays) and the semi-industrial deepwater fishery (535 fishermendays).

In 2024, the effort of the Mauritian fleet operating on the SIOFA Sub Area 8 amounted to 1 887 fishermendays, from the semi-industrial shallow water fishery (1 424 fishermendays) and the semi-industrial deepwater fishery (463 fishermendays).

Effort for trawl fishery was 830 trawl minutes for 2024.

Table 2 – Effort in fishermen days from the different fisheries that were conducted on the Saya de Malha bank- SIOFA Sub Area 8 from 2020-2024.

	Fisherman - days							
Fishery	2020	2021	2022	2023	2024			
Industrial shallow water	666	720	No	No	No			
banks fishery	000	120	fishing	fishing	fishing			
Semi-industrial shallow water	1 176	504	573	1 803	1 424			
fishery								
Semi-industrial deepwater	572	237	978	535	463			
fishery	012	201	510		100			
TOTAL	2 414	1 461	1 551	2 338	1 887			

Source: Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries

Table 3 - Effort (trawl minutes) the trawl fisheries (Mid water trawl).

YEAR	Effort per Sub-Area (Trawl minutes)										
	1	2 3a 3b 4 5 6 7 8									
2020											
2021											
2022											

2023						
2024	399	183	415			

*Note: Blanks: no operations* 

Table 4: Catch and effort data 2021-2024 from the Industrial Shallow Water Banks Fishery for the Saya de Malha Bank

	SAYA DE MALHA – SIOFA Sub Area 8											
Year	Catch (tonnes) Fishermen days CPUE (kg/fishing day)											
2021	36.4	720	50.6									
2022	Nil	-	-									
2023	Nil	-	-									
2024	Nil	-	-									

Source: Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries

Table 5: Catch and effort data from 2021 to 2024 the Semi-Industrial Shallow Water Banks Fishery for the Saya de Malha Bank

	SAYA DE MALHA – SIOFA Sub Area 8										
Year	Year Catch (tonnes) Fishermen days CPUE (kg/fishing day)										
2021	46.7	504	92.6								
2022	43.4	573	75.8								
2023	147.9	1 803	82.0								
2024	101.7	1 424	71.4								

Source: Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries

Table 6: Catch and effort data from 2021 to 2024 the Deepwater Snapper/Grouper Fishery for the Saya de Malha Bank

	SAYA DE MALHA – SIOFA Sub Area 8										
Year	Year   Catch (tonnes)   Fishermen days   CPUE (kg/fishing day										
2021	22.9	237	96.7								
2022	59.4	978	60.7								
2023	37.3	535	69.7								
2024	26.6	463	57.5								

Source: Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries

Table 7: Annual Catch (ton) (Trawl fisheries) by Sub-Area (Mid water trawl)

YEAR		Sub-Area										
	1	1 2 3a 3b 4 5 6 7 8										
2020												
2021												
2022												
2023												

2024	51	1.5	20.3	27.0			

Note: Blanks: no operations

The retained catches by species from each fishery are given in tables 8, 9, 10 and 11, accordingly. Data was compiled from logbooks received from respective fishing vessels/boats.

Table 8: Catch by species - Industrial Shallow Water Banks Fishery

		Industrial Shallow Water Banks Fishery Saya de Malha Bank – SIOFA Sub Area 8 Retained Catch (T)										
	White Fish (Mainly Lethrinus mahsena) Red Fish (Variola spp and Plectropomus Aprion virescens Snappers (Lutjanidae) Tuna Tuna											
2020	50.90	4.40	0.35	0.00	0.04	55.69						
2021	32.58	2.25	1.58	0.00	0.00	36.41						
2022	Nil Nil Nil Nil Nil Nil											
2023	Nil	Nil	Nil	Nil	Nil	Ni1						
2024	Nil	Nil	Nil	Nil	Nil	Nil						

Source: Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries

Table 9: Catch by species – Semi-Industrial Shallow Water Banks Fishery

	Semi-Industrial Shallow Water Banks Fishery Saya de Malha – SIOFA Sub Area 8 Retained Catch (T)						
	White Fish (Mainly <i>Lethrinus</i> <i>mahsena</i> )	Red Fish ( <i>Variola</i> spp and <i>Plectropomus</i> spp)	Aprion virescens	Snappers (Lutjanidae)	Polysteganus baissaci	Epinephelus morrhua	Total
2020	53.74	8.17	3.86	0.67	0.00	0.00	66.43
2021	43.78	1.25	1.63	0.00	0.00	0.00	46.66
2022	38.81	3.16	1.46	0.00	0.00	0.00	43.43
2023	142.55	3.43	1.88	0.00	0.00	0.00	147.86

2024	94.94	4.16	1.07	1.1	0.3	0.1	101.67	l
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Table 10: Catch by species – Semi-Industrial Snappers and Groupers Fishery

	Semi-Industrial Snappers and Groupers Fishery Saya de Malha – SIOFA Sub Area 8 Retained Catch (T)							
	Snappers (Lutjanidae)	Polysteganus baissaci	Epinephelus morrhua	Aprion virescens	White Fish (Mainly Lethrinus mahsena)	Red Fish ( <i>Variola</i> spp and <i>Plectropomus</i> spp)	Others	Total
2020	26.91	13.36	2.92	1.74	0.79	0.03	0.67	46.41
2021	9.17	10.22	2.54	0.52	0.00	0.00	0.45	22.90
2022	45.61	9.02	4.60	0.15	0.00	0.00	0.00	59.38
2023	31.38	3.45	1.59	0.88	0.00	0.00	0.00	37.30
2024	20.82	4.72	0.74	0.35	0.00	0.00	0.00	26.63

Source: Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries

It is to be noted that *Variola* spp. and *Plectropomus* spp catches are recorded as 'red fish' in the logbooks. The same applies to 'white fish' which includes mainly *Lethrinus mahsena*, but may also include some *L. nebulosus*, *L. rubrioperculatus*)

With regard to incidental species and bycatch, it is pointed out that no such species (seabirds, mammals, sharks and VMEs) were obtained in the fisheries.

Table 11: Catch by species – Trawl Fishery (Midwater Trawl)

		Trawl Fishery (Midwater Trawl) Retained Catch (T)					
	Alfonsino (B <i>eryx decadactylus</i> )	Boarfish ( <i>Pentaceros</i> <i>richardsoni</i> )	Butter fish (Schedophilus velaini)	Blue nose (Hyperoglyphe antarctica)	Cardinal fish ( <i>Epigonus</i> spp)	Ruby fish ( <i>Plagiogeneion</i> <i>rubiginosum</i> )	Total
2020		Ι	No opera	ations			Nil
2021		No operations					Ni1
2022		No operations					Ni1
2023	No operations				Nil		
2024	85.56	0.50	4.08	1.34	0.05	7.27	98.8

### 4. Fisheries data collection

### Statistical data collection

Data from the different fisheries are collected through a logbook system. Upon arrival of the fishing vessels at the fish landing port at Port-Louis, logbooks are verified and collected by the Fisheries Protection Officers of the Port State Control Unit. The logbooks are then sent to the Marine Resources Division of Albion Fisheries Research Centre for data verification, processing, analysis and data entry. The logbooks for each vessel provide daily information on

catch and effort at specific fishing locations, amongst others. The catch per fisherman day (CPFD) is calculated by dividing the catch in kg by the number of fishermen days and the fishermen days are calculated by multiplying the number of fishermen by the number of fishing days. Table 9 shows a summary of data collected in logbooks.

Length and weight data are collected during sampling exercises during landing of catch at the port. During the year under report, no surveys and research activities was undertaken.

Table 12: Summary of data collected in logbooks

	Fishery: The same logbook templates are used for all the fisheries						
Year	Time scale	Spatial scale	Species details (taxonomic resolution)				
2021	Day	Daily positions in Latitude and longitude of Industrial vessels (Mother vessels) and Semi-Industrial vessels	Genus (e.g White fish = Lethrinids; Red fish = <i>Plectropomus</i> spp and <i>Variola</i> spp)  Species: for <i>Aprion virescens</i> , <i>Polysteganus baissaci</i> and <i>Epinephelus morrhua</i> )				
2022	Day	Daily positions in Latitude and longitude Semi- industrial vessels	Genus (e.g White fish = Lethrinids; Red fish = Plectropomus spp and Variola spp)  Species: for Aprion virescens, Polysteganus baissaci and Epinephelus morrhua)				
2023	Day	Daily positions in Latitude and longitude Semi- industrial vessels	Genus (e.g White fish = Lethrinids; Red fish = <i>Plectropomus</i> spp and <i>Variola</i> spp)  Species: for <i>Aprion virescens</i> , <i>Polysteganus baissaci</i> and <i>Epinephelus morrhua</i> )				
2024	Day	Daily positions in Latitude and longitude Semi- industrial vessels	Genus (e.g White fish = Lethrinids; Red fish = <i>Plectropomus</i> spp and <i>Variola</i> spp)  Species: for <i>Aprion virescens</i> , <i>Polysteganus baissaci</i> and <i>Epinephelus morrhua</i> )				

Table 13: Tempo-spatial resolutions of the trawl fisheries data (2024)

Trawl Fishery	
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Year	Tow/set	Time scale	Spatial scale	Species details (taxonomic resolution)
2024	Set by set	Set-tow hauling time, daily	Tow/set (second)	Species: for Beryx decadactylus, Pentaceros richardsoni, Schedophilius velaini, Hyperoglyphe antarctica and Plagiogeneion rubiginosum  Genus for Epigonus

### 5. Vulnerable Marine Ecosystems (VME) Threshold

Mauritian fishing vessels are not involved in fishing with gears that interfere with VMEs.

### 6. Biological sampling

### Industrial Shallow Water Banks Fishery

No vessels operated in this fishery in 2024.

### Semi-industrial Shallow Water Banks Fishery

Sampling is done during unloading of the semi-industrial chilled fish boats. Chilled fish from the fishing boats is unloaded in small quantities in plastic crates. At random the crates are taken for sampling and length/weight data are measured. The fish is measured on a measuring board and then the weight is recorded from a scale balance. The main targeted species for collection of length and weight is *Lethrinus mahsena*.

### Semi-Industrial Deepwater snapper and grouper fishery

Random sampling is carried out upon calling of vessels at the port. The fish can be chilled or frozen (as a boat can have both frozen and chilled fish on the same trip). If the catch is chilled the same sampling procedure as for the semi-industrial chilled fish fishery (Semi-industrial Shallow Water Banks Fishery) is applied. When the fish is frozen, then only the length frequency sampling is done as the frozen fish is gilled and gutted. The targeted species for sampling are *Polysteganus baissaci*, *Etelis* spp. and *Pristipomoides* spp.

Table 10: Summary of total number of specimens sampled

Number of specimens sampled by year

Species (FAO code)	2021	2022	2023	2024
Lethrinus mahsena (LTQ)	375	155	251	192
Etelis carbunculus (ETA)	90	105	162	151

### 7. Description of data verification mechanism

Verification mechanisms:

- Fishing positions of licensed fishing vessels are verified through Vessel Monitoring System (VMS).
- Logbook system. Logbook data include date of departure and arrival, species/group of species caught, positions, depth, no. of fishermen involved, number of fishing days.
- Port State Control Unit enforces port state measures and associated regulations.
- Port sampling is done regularly on a random basis for fish data collection and associated inspection onboard the fishing vessel.

## 8. Summary of Observer Programmes and Port Sampling Programmes

Port sampling is carried out upon arrival of fishing vessels for the collection of length and weight data.

Observer Programme 2024:

Collection of fisheries data by scientific observers is imperative for the scientific community. The CMM 02(2023) (Data Standards) also provides the necessary guidelines for the type of data to be collected on board fishing vessels.

In line with the requirements of the Conservation and Management Measures of SIOFA, one scientific observer was deployed on the Mauritian flagged

vessel, "Klondyke 139" which undertook only two fishing campaigns in 2024. However, the observation was covered for only one trip and the observer report was submitted to the Ministry after completion of the fishing trip and arrival at Port Louis.

Table 11: Observer programme summary table

	Trips Coverage	Total No. of sets/hauls of trip covered		Incidental bycatch observation coverage
Mid water trawl	50 %	43	100%	No incidental bycatch encountered

Table 12: Sampling information collected by observer by species and number

Species	Scientific Name	Number
		sampled
BWA	Hyperoglyphe antartica	44
BXD	Beryx decadactylus	346
CDL	Epigonus spp	32
RYG	Plagiogeion rubiginosum	31
SEY	Schedophilus velaini	116
EDR	Pentaceros richardsoni	56

ANNEX 1

Annex 1: Demersal species caught from Saya de Malha Bank				
Fishery	Genus and species names	Common Name		
The Industrial Shallow Water	Mainly <i>Lethrinus mahsena</i> , but also includes some <i>Lethrinus nebulosus</i> , <i>Lethrinus rubrioperculatus</i> ,	White fish/Emperors		
Banks Fishery	Plectropomus spp and Variola spp	Red fish/Groupers		
	Aprion virescens	Green jobfish		
The Semi- Industrial Shallow Water	Mainly Lethrinus mahsena, but also includes some Lethrinus nebulosus, Lethrinus rubrioperculatus,	White fish/Emperors		
Bank Fishery	Plectropomus spp and Variola spp	Red Fish/Groupers		
	Aprion virescens (Lutjanidae)	Green jobfish		
	Pristipomoides spp. Etelis spp.	Snappers		
The Semi- Industrial	Polysteganus baissaci	Frenchman seabream		
Deepwater snapper/grouper	Epinephelus morrhua	Comet grouper		
Fishery	Some Aprion virescens	Green jobfish		