

SC-04-28

4th Meeting of the Southern Indian Ocean Fisheries Agreement (SIOFA) Scientific
Committee
25-29 March 2019, Yokohama, Japan

Draft Overview of SIOFA Fisheries 2018

Please note that National Reports and SC Working Group reports shall be classified as working papers

Relates to agenda item: 4.3

Working paper Info paper

SIOFA Secretariat

Abstract

A compilation of the information provided in National Reports (as at 18 Mar 2019) and information extracted out of the Secretariat databases provide a draft overview of the SIOFA fisheries status in 2018.

Recommendations

SC4 consider this draft in compiling a complete and final version.

CCPs for whom some data is missing are requested to compile relevant data in preparation for completing this report.

Missing and/or additional relevant data may be submitted direct to the SIOFA Data Manager Pierre PERIES.

Overview of SIOFA Fisheries 2018

The information presented below has been extracted from the different reports submitted to Scientific Committees (SC2, SC3 and SC4). Where the information from the national reports is insufficient, data has been extracted from SIOFA databases.

The figures are incomplete as not all statistical data is available at time of compiling this draft (February, 2019). Data submission to SIOFA is scheduled for May 31 each year.

These figures are in constant improvement with the arrival of new participating countries and better and newer historical datasets.

Active Fleet Composition

Table 1: Summary of active vessel operating by flag/gear and by year in the SIOFA area

Flag	Gear	Year						
		2012	2013	2014	2015	2016	2017	2018
ATF	Pots/Traps	0	0	0	0	1	0	1
	Longlines	2	2	2	2	0	2	0
AUS	Multipurpose	0	0	0	1	1	0	0
	Longlines	0	0	0	0	0	0	1
	Trawls	1	1	1	0	0	0	0
CHN*	Longlines	17	3	0	0	0	0	?
	Seine nets	0	0	6	6	8	5	?
COOK	Trawls	2	2	2	2	2	2	2
COM**	Handlines							2
EUF	Longlines	2	2	1	0	1	1	0
EUS	Gillnets	0	1	1	1	0	0	0
	Longlines	0	0	0	1	1	1	2
JPN	Longlines	0	1	0	0	0	1	0
	Trawls	2	2	1	2	2	2	1
KOR	Longlines	1	3	0	0	0	0	?
	Trawls	1	1	0	0	0	0	?
MUS		?	?	?	?	?	?	?
SYC		?	?	?	?	?	0	0
THA	Pots/Traps				1	2	0	0
	Trawls				56	60	13	0
	Total	28	18	14	72	78	27	7

* China as a non-contracting party

** Comoros as a participating non-contracting party

? no information provided

Note: Thailand fleet was mainly composed of small tonnage vessels. Comoros fleet is composed of 2 mother vessels for a fleet of many small boats operated by 2-3 fishermen.

Fishing Effort

Table 2. Gear related fishing effort by country and year.

Flag	Gear	Effort unit	Year							
			2012	2013	2014	2015	2016	2017	2018	
ATF	Longline	sets		126	103	66			33	
	Longline	x1000 hooks								2.615
	Pot/Trap	number								50
AUS	Trawl	hours	252	62	106	15	26	0	0	
	Longline	x1000 hooks	0	0	0	2	40	0	28	
CHN	Seine net	hours	0	0	4500	10000	4000	300	?	
	Longline	x1000 hooks	5010	2050	0	0	0	0	?	
COK	Trawl	shots	1781	1601	1971	2729	1985	2230	1667	
COM	Handline								?	
ESP	Gillnet	Km			5000	1200				
	Longline	x1000 hooks				2300	3200	3200	4940	
FRA	Longline							np	0	
JPN	Trawl	hours	520	1000	750	2250	2500	3250	?	
	Longline	x1000 hooks		96				64		
KOR	Longline	hooks	2193	1023						
	Trawl	hours	623	233						
MUS			?	?	?	?	?	?	?	
SYC			?	?	?	?	?	0	0	
THA	Trawl	shots				4090	4552	795	0	
	Pot/Trap	number					8	10	0	
TOTAL	longline *	hooks (x1000)	7203	3169		2302	3240	3264	4971	
	trawl **	shots	3176	2896	2827	9084	9063	6275	0	
		hours	1395	1295	856	2265	2526	3250		

* does not include potential hooks number from sets

** total trawl effort must take into account both shots number and hours.

? no information provided

Note: 2018 fishing effort are underestimated as some figures and information have not been provided.

Total catches

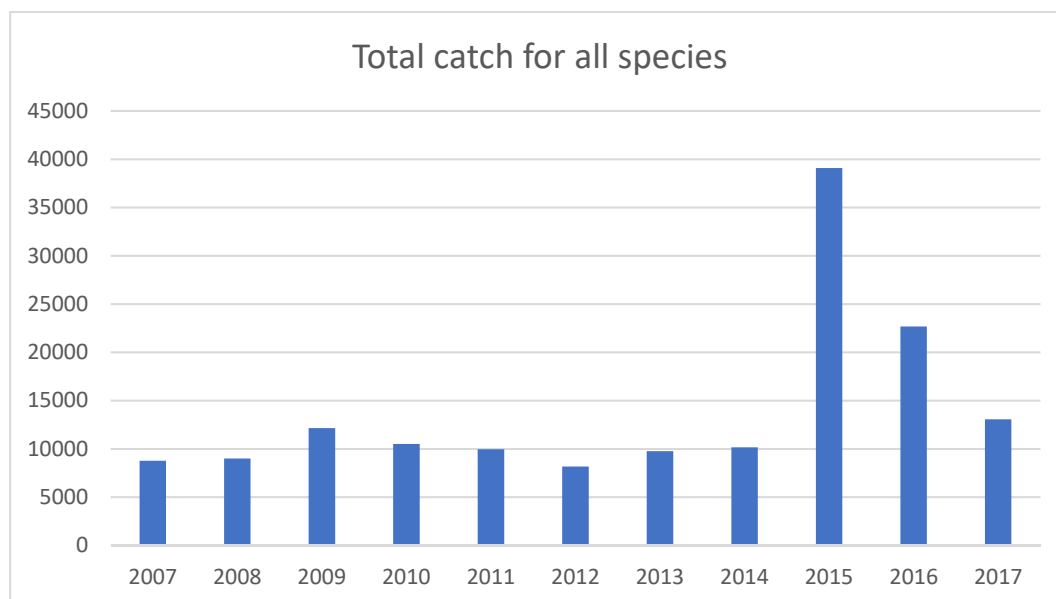


Figure 1: total yearly catch (tonnes) in SIOFA area

High figures in 2015, 2016 and 2017 are explained by the new entry of Thailand as Contracting Party in the Agreement. Thailand catches were mostly made from squads (*Decapterus sp.*) and lizardfish (*Saurida sp.*).

Catch Composition

The catch of trawl vessels is predominantly alfonsino (figure 2) and orange roughy (figure 3). Species also caught by trawling include pelagic armourhead, bluenose warehou, violet warehou, ocean blue-eye trevalla and oreo dories, cardinal fish, hapuku wreckfish.

The addition of Thailand's fishery added Lizardfish and scads as a major catch from small trawlers since 2015.

The catch of longline vessels differs between two groups. There are longline vessels (reported by Japan, Korea and France Overseas Territories) that catch Patagonian toothfish (figure 4) and associated species such as blue antimora.

The other longline vessels catch hapuku wreckfish and ocean blue-eye trevalla, pelagic armourhead, deep-water sharks (Squalidae), alfonsino, rubyfish and common mora.

The catch of the gillnet vessels was predominantly deep-water sharks (Squalidae, figure 5).

China's light seining fishery is targeting mackerel and Brama species (such as *Brama japonica*) and its bottom longline fishery is targeting ruby snapper and other species in the Lutjanid family.

Alfonsinos (*Beryx sp.*)

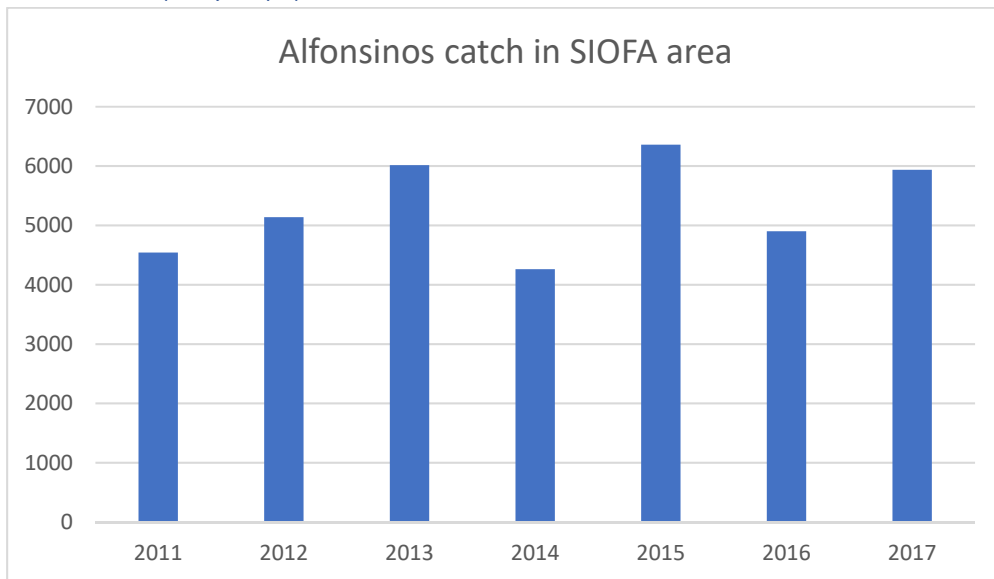


Figure 2: yearly catch of alfonsinos (tonnes)

Orange roughies (*Hoplostethus atlanticus*)

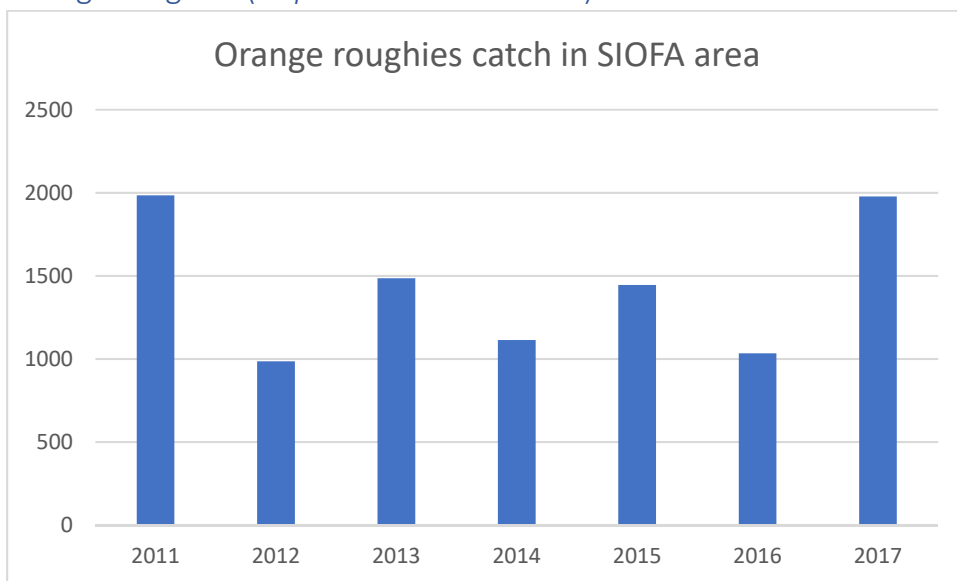


Figure 3: yearly catch of orange roughies (tonnes)

Patagonian toothfish (*Dissostichus eleginoides*)

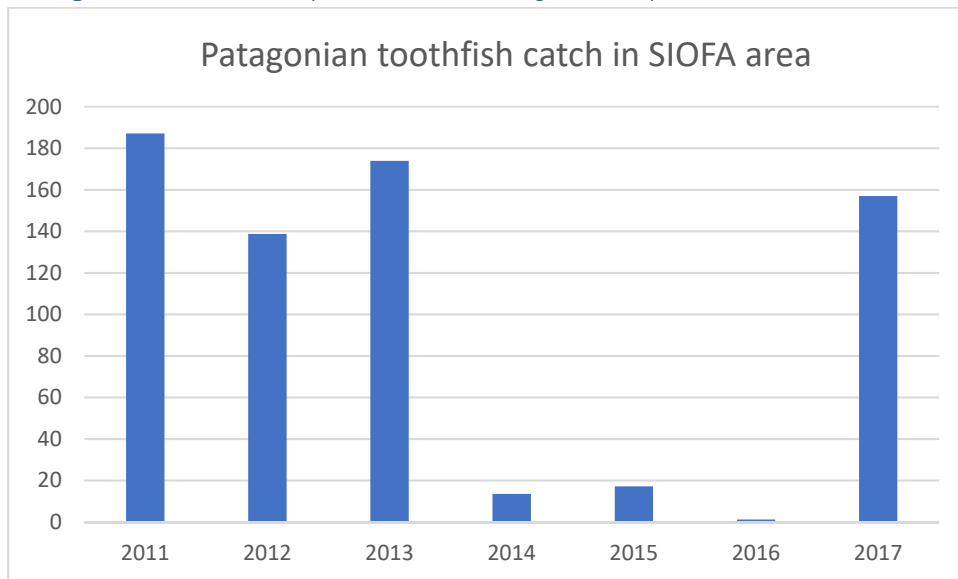


Figure 4: yearly catch of Patagonian toothfish (tonnes)

Deep-water sharks

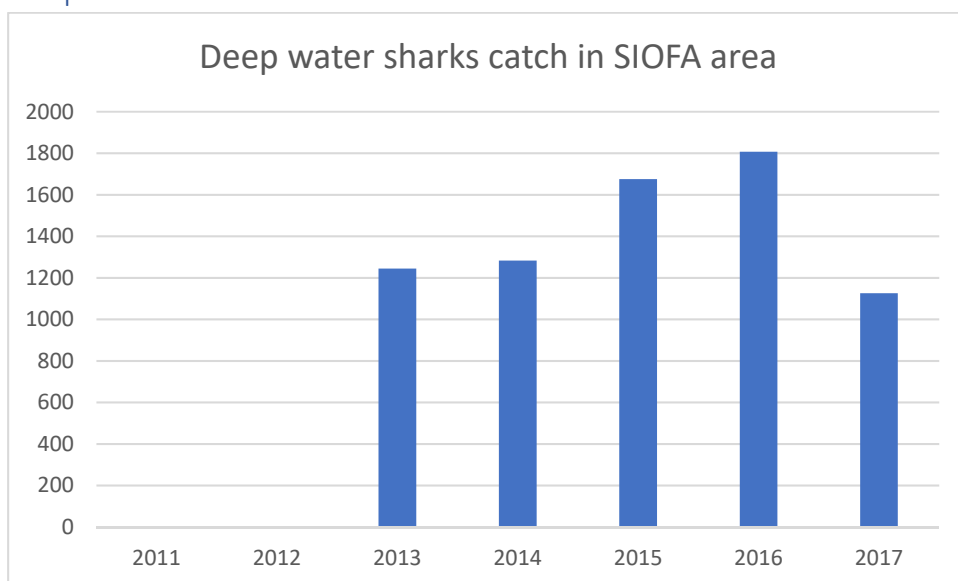


Figure 5: Yearly catch of deep-water sharks (tonnes)

Vulnerable Marine Ecosystems (VME)

One of the tools SIOFA implements to manage impacts on Vulnerable Marine Ecosystems (VME) from fishing is the application of move-on rules when thresholds of VME indicators are reached. The table below provides a summary of the thresholds and move-on rules applied by each Flag.

Flag	Threshold	Response and Management	Encounter
COK	<p>Trawl tow, the presence of more than 60 kg of live coral and/or 400 kg of live sponge.</p> <p>If any subsequent trawl within 1nm of the encounter trawl contains more than 30 kg of live coral/and or 200 kg of live sponge</p>	<p>Reported to Cook Islands within 24 hrs of encounter</p> <p>The vessel must not fish within 5nm of that area until the Ministry of Marine Resources has completed an investigation.</p> <p>However, if the vessel deploys an underwater camera system on the trawl net, and the Cook Islands Observer verifies that no substantial VME structures are present, fishing can continue.</p>	No threshold breached out of 627 bottom trawls
KOR	The threshold for all bottom fishing vessels: >60kg of coral per set or over 800kg of sponges per set.	<p>If the amount of VME that exceeds the weight specified in the criteria, the vessel shall apply a 2 nautical miles move-on rule to resume its fishing operation.</p> <p>The vessel shall relocate its fishing position until it reaches a point where no VMEs are confirmed.</p>	
AUS	<p>Trawl > 50 kg of corals or sponges in a shot for trawlers</p> <p>Line >10 kg of corals or sponges per 1000 hooks or 1200 metre section of line (whichever is shorter)</p>	<p>In the SIOFA area of waters</p> <p>(a)if the combined catch of coral or sponge in any one trawl shot exceeds 50kgs the holder must cease fishing within an area two nautical miles either side of the trawl track extended by two nautical miles at each end of the trawl track; or</p> <p>(b)if the combined catch of coral or sponge in any one shot for line method exceeds 10kgs for any 1000 hook section of line or a 1200 metre section of line, whichever is the shorter; the holder must cease fishing within a radius of one nautical mile from the midpoint of the line segment.</p> <p>The holder most not fish in that area using the same method as used for that shot that triggered the limit until AFMA notifies otherwise.</p> <p>In the SIOFA area of waters if a vessel exceeds the catch limit for coral and sponge then as soon as practicable, but in any event no later than 24 hours after the shot, the concession holder must notify AFMA's Service One section. The notification must include details of the shot including the location.</p>	According to logbook data, no thresholds were triggered by any Australian-flagged vessels in 2018.
JPN	Following Article 11 CMM 2016/01, Japan temporarily establishes threshold levels for encounters with VMEs and move-on protocols. For trawl fisheries, as they operate in the mid-water, no threshold levels have been established. For the bottom longline fisheries, Japan applies those used in CCAMLR.		

Flag	Threshold	Response and Management	Encounter
EUS	The EU-Spain bottom longline fleet is applying the rules adopted by the Fishing Administration, like those applied in SEAFO and CCAMLR in the definition of the VME encounter and thresholds, together with the protocols adopted in the CMM 2016-01.	<p>1- Quantify the species of the VME indicator, that is, sea pens, coral and sponge.</p> <p>2- If the number of VME indicators exceeds the limits indicated above per set of fishing:</p> <p>2.1- According to Annex 1 of CMM 2018-01, it will indicate the incident to the General Secretariat of Fisheries.</p> <p>2.2- According to point 12 of CMM 2018-01, you will stop fishing and will be separated at least 1 nautical mile from the midpoint of the operation, in the direction least likely to lead to an additional encounter. The captain will use his best judgment based on all available sources of information. "</p>	
THA	<p>Bottom trawl: sponges >700 Kg, corals >60 Kg per operation</p> <p>Longline: 10 Kg sponges or corals / per 1000 hooks or per 1,200 meters</p> <p>Trap: >10 Kg sponges or corals</p>	<p>1.Stop fishing operations and move:</p> <p>-for bottom trawl: at least 2 nautical miles from area,</p> <p>-for longline: at least 1 nautical mile away from centre of line segment,</p> <p>-for traps: at least 1 nautical mile away from the area.</p> <p>2.Report to Department of Fisheries within 24 hours</p>	No record from fishing logbook or observer report that fishing activities encountered Endangered, Threatened or Protected (ETP) species or marine mammals, corals or sponges.
ATF		Vessel must collect and retain all benthic organisms for each segment in numbered buckets, those buckets will be made available for observers. The Fishing observers reports all the VME observation in the digital logbook.	No interactions with threatened, endangered and protected species were reported in 2018.

Observers and port sampling programs

SIOFA requires its members to implement Scientific Observer programs. Table 4 provides a summary of the observer programs implemented by each Flag.

Table 4. Summary of Observer and Port Sampling programs.

Flag		Description
Japan	Training	Training provided annually since 2016.
	Collection	According to CMM2018/02 for trawl fisheries. Use CCAMLR template for longline fisheries.
	Coverage	Started in January 2017. 100% coverage.
	Port sampling	No port sampling program.
Australia	Coverage	All observer coverage requirements were met during 2018
	Training	AFMA recruits and trains the observers. 16 trained observers
	Collection	2018 report not yet available
	Port sampling	Australia does not have a port sampling program for vessels that fish in the SIOFA Area.
EU Spain	Training	The scientific observers (Biologists or Marine Science degree) are part of the personnel trained at the Instituto Español de Oceanografía; specific training is also adapted for all fleets that are monitored.
	Collection	Reports on the scientific observations were prepared and provided to SIOFA Secretariat, and also information on toothfish fishery tag recovering were delivered
	Coverage	72% for one vessel and 100% for the other
	Port sampling	EU Spain do not have a port sampling program for vessels fishing SIOFA species.
EU France	Port sampling	EU France do not have a port sampling program for vessels fishing SIOFA species.
Mauritius		no information provided
Thailand	Training	Training provided according to FAO guideline. 22 observers trained for SIOFA area
	Coverage	n/a
	Collection	n/a
	Port sampling	All landings are monitored, fish identified by sampling. Declaration checked against the samples
Seychelles	On-board observer	n/a
	Port sampling	no information provided

Flag		Description
French Territories	Port sampling	Landed boxes of catch are weighted in port
	Coverage	
	Collection	Data collected are sent to MNHN weekly for verification
	Training	
Cook is.	Coverage	100% on Cook vessel. Visas constraint for Pacific Islands observers to reach South Africa
	Collection	
	Port sampling	Port sampling by MMR Fisheries Officers in conjunction with port inspections is now occurring on a managed basis
	Training	7 high experienced observes could benefit the SIOFA trawler cross-endorsement training.

FAO species codes and alternative names used by members of the Scientific Committee

FAO common name	FAO code	Scientific name	Alternative common name
Alfonsinos	ALF	<i>Beryx spp.</i>	Alfonsino
Splendid alfonsino	BYS	<i>Beryx splendens</i>	Alfonsino
Bluenose warehou	BWA	<i>Hyperoglyphe antarctica</i>	Blue-eye trevalla, Antarctic butterfish
Orange roughy	ORY	<i>Hoplostethus atlanticus</i>	
Violet warehou	SEY	<i>Schedophilus velaini</i>	Indian Ocean trevalla
Pelagic armourhead	EDR	<i>Pentaceros richardsoni</i>	Southern boarfish
Patagonian toothfish	TOP	<i>Dissostichus eleginoides</i>	
Common mora	RIB	<i>Mora moro</i>	Ribaldo
Wreckfish	WRF	<i>Polyprion americanus</i>	<i>Centroscymnus coelolepis</i>
Portuguese dogfish	CYO		
Hapuka	HAU	<i>Polyprion spp.</i>	Antarctic butterfish (Japan?)
Rubyfish	RYG	<i>Plagiogeneion rubiginosum</i>	
<i>Plagiogeneion spp.</i>		Rubyfish	
Smooth oreo dory	SSO	<i>Pseudocyttus maculatus</i> <i>Neocyttus rhomboidalis</i>	
Spiky oreo	ONV		
Blue antimora	ANT		
Hapuku wreckfish	WHA	<i>Polyprion oxygeneios</i>	Hapuku
Cardinalfishes nei	APO	<i>Apogonidae</i>	
Cardinal fishes nei	CDL	<i>Epigonidae</i>	Deepwater cardinalfishes
Oreo dories nei	ORD	<i>Oreosomatidae</i> <i>Helicolenus dactylopterus</i>	<i>Saurida undosquamis</i>
Blackbelly rosefish	BRF		
Lizardfish	SZX	<i>Saurida spp.</i>	
Scads	SDX	<i>Decapterus russelli</i>	Round scad
Ruby snapper	ETC	<i>Etelis coruscan</i>	