SC-05-18

5th Meeting of the Southern Indian Ocean Fisheries Agreement (SIOFA) Scientific Committee

30 March – 03 April 2020, Saint Gilles, Réunion

European Union Annual Report on fishing season 2019

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

Relates to agenda item: 3 Working paper ☒ Info paper ☐

Delegation of European Union

Abstract

Recommendations ***(working papers only)***

European Union
Annual Report on fishing season 2019

Submitted to SIOFA 5th Scientific Committee meeting (2020)

Introduction

The report presents an overview of the fishery data available from the EU fleets operating at SIOFA area. This information should be considered merely informative, as some inconsistencies continuing been detected regarding species identification and also in the process of fishing data recollection.

The information is still valuable to provide a general overview of past and present of fishing activity and of the main marine resources with commercial interest in the area. The implementation of a system to collect the appropriate data using SIOFA standard forms is still needed.

Description of fisheries

This report includes data from the EU Member States active in SIOFA (France and Spain) during the period indicated in Tables 1 and 2.

Table 1. Summary of EU-France fleet activity in the SIOFA Area.

Year	Number of vessels
2009	2
2010	2
2011	2
2012	2
2013	2
2014	1
2015	interruption
2016	1
2017	1
2018	0
2019	0

Two EU-France longliners, less than 25m, have a demersal fishery history in the SIOFA Area, in the Saya de Malha Bank, in addition of their tuna directed activities. They did not request any autorisation in 2019 and did not fish in the SIOFA area.

EU-Spain fishing activities within the SIOFA Convention Area have been focused in three fishing grounds, namely Walter Shoals (Area 2), DelCano rise (Area 3b) and more recently in Williams ridge (Area 7). Historically have also been some activities in the Mozambique plateau (Area 1).

Information on Table 2 summarizes the fishing periods by gear (trawl, bottom longline and bottom gillnet) conducted by the EU-Spain fleets in the SIOFA CA. In 2019 one vessel has been present fishing with Autoline system (282 fishing days).

Only bottom longlines have been used from April 2015 up to now, mainly using the Autoline system but in 2018 when a second vessel has participated using the Spanish system LL.

Table 2. Summary of EU-Spain fleet activity in the SIOFA Area.

Year	Number vessels (effort metric)	Fishing period	Gear
2000	1	May - November	Bottom trawl / Midwater trawl
2001	1	October - November	Bottom trawl / Midwater trawl
2003	1	May - June	Bottom longline
2004	2	August - November September - December	Bottom longline
2005	2	August - November January-February & November - December	Bottom longline
2006	2	August - December January & November - December	Bottom longline
2007	2	January - December January-February & December	Bottom longline
2008	2	January - May January - December	Bottom longline
2009	1	January - March	Bottom longline
2013	1	January - December	Gillnet
2014	1	January - December	Gillnet
2015	1	January - December	Gillnet: January-March Bottom longline: April-December
2016	1	January - December	Bottom longline
2017	1	January & May-December	Bottom longline
2018	2	January-February & April-October (1 vessel) May-August (1 vessel)	Bottom longline
2019	1	January-December	Bottom longline

Walters Shoals and their neighboring Southern seamounts, together with a specific place in the Mozambique Plateau are the areas with greater presence of deepwater sharks. In DelCano the presence of these species are much lower and inexistent in Williams ridge.

The fishing footprint of EU-Spain fleet in 2019 is shown in Figure 1, using a 10'x10' grid. Fishing took place in Areas 2, 3b and 7.

From 2017, a fishery targeting Patagonian toothfish has been focused in DelCano rise and Williams ridge.

Bird scare (tori) lines were deployed in most of the settings/haulings (if weather permitted).

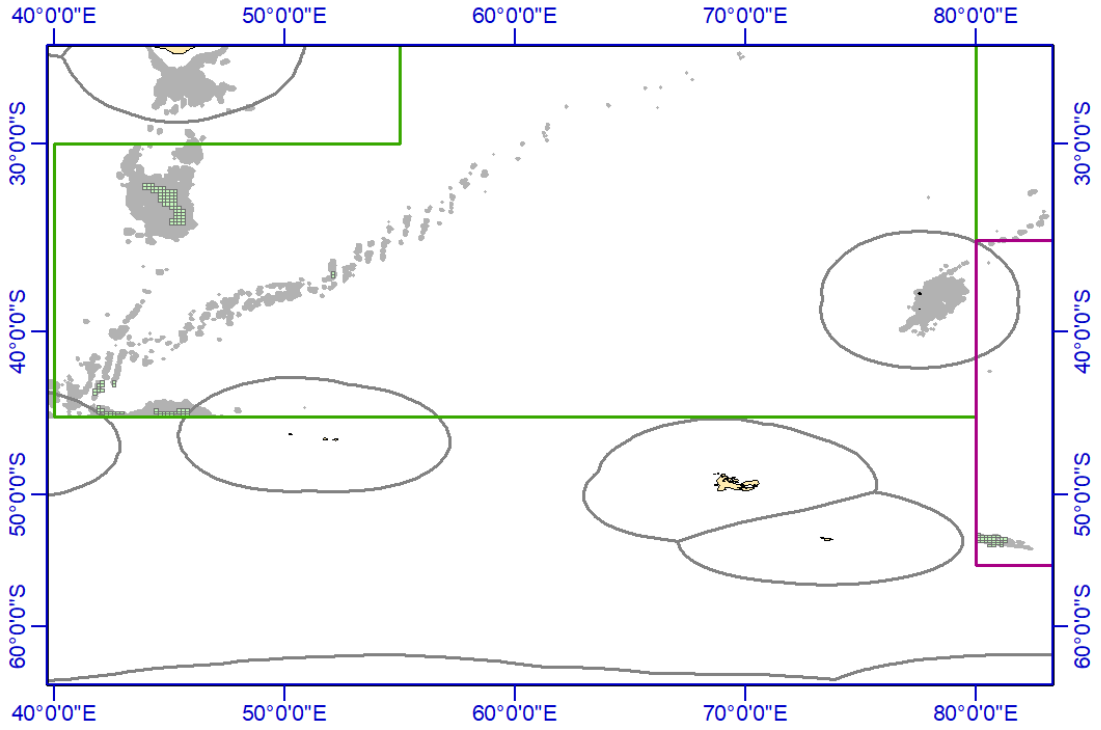


Figure 1.- EU-Spain 2017-2019 footprint.

Catch, effort and CPUE summaries

Effort

No fishing activity by EU-France occurred in the SIOFA area in 2019.

EU-Spain has not increased its effort (in number of vessels) above the limit of two vessels, as in 2019 only one vessel operated and the number of fishing days decreased (from 289 days in 2018 to 282 days in 2019).

The number of hooks (fig. 2) remained stable in the period 2016-2017 at a level of around 3 200 000 hooks per year (one vessel), in 2018 increases up to 4 940 000 hooks per year (two vessels), and in 2019 decrease to 3 440 000 hooks (one vessel).

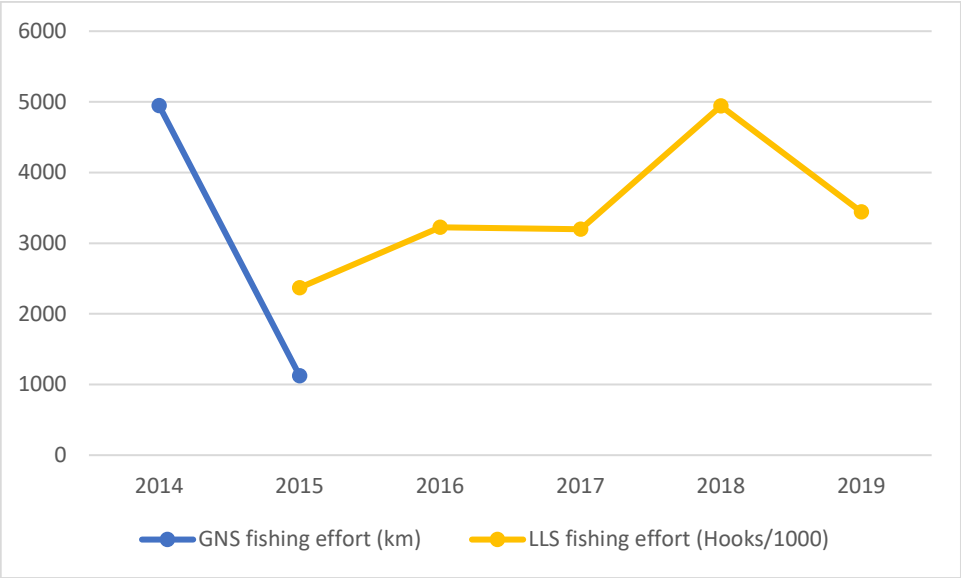


Figure 2.- Evolution of GNS and number of km/hooks of the EU-Spain LLs (yellow line: Bottom Longliners: Nhooks*1000, blue line: Gillnetss: km) from 2014 to 2019.

Catch

Traditionally, the target species (catch composition in table 3) of EU-France fleet operating in the SIOFA area were:

- *Jobfish* (PFM)
- *Snappers* (SNA, AVR, ETC, ETA)
- *Seabreams* (SBX)
- *Groupers* (GPX, EEP, EWU, EEA, EML)
- *Emperors* (EMP, LTQ)

As already indicated above, no fishing activity by EU-France occurred in the SIOFA area in 2019. However, the two vessels have declared tuna related fisheries: the data have been transmitted to the IOTC.

Table 3. Specific catch composition (proportion) by year and area for the EU-France fleet (2009-2019).

Year	*Snappers*	*Jobfish*	*Groupers*	*Emperors*	*Seabreams*	Others
2009	0,31	0,17	0,13	0,16	0,05	0,18
2010	0,25	0,34	0,15	0,13	0,06	0,07
2011	0,29	0,18	0,14	0,09	0,07	0,22
2012	0,33	0,33	0,06	0,04	0,00	0,24
2013	0,16	0,41	0,07	0,04	0,08	0,25
2014	0,06	0,46	0,06	0,00	0,00	0,42
2016	0,25	0,05	0,17	0,01	0,24	0,28
2017	0.18	0.03	0.45	0.05	0.27	0.8
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-

Historically, the target species of EU-Spain fleets operating in SIOFA seamount were: the Alfonsinos (Beryx spp.); Orange roughy (Hoplostethus atlanticus); Wreckfish (Polyprion spp.); Portuguese dogfish (Centroscymnus coelolepis); Southern boarfish (Pseudopentaceros richardsoni); and Patagonian toothfish (Dissostichus eleginoides).

Within the by-catch species of commercial interest it can be highlighted: the Bluenose warehou (Hyperoglyphe antarctica); Blackbelly rosefish (Helicolenus dactylopterus); Common mora (Mora moro); Oilfish (Ruvettus pretiosus); Black cardinal fish (Epigonus telescopus); Birdbeak dogfish (Deania calcea); Kitefin shark (Dalatias licha); Gulper sharks (Centrophorus spp); Lanternshark (Etmopterus spp); Roudi escolar (Promethichthys prometheus); Violet warehou (Schedophilus velaini); Oreo dories (Oreosomatidae) and others.

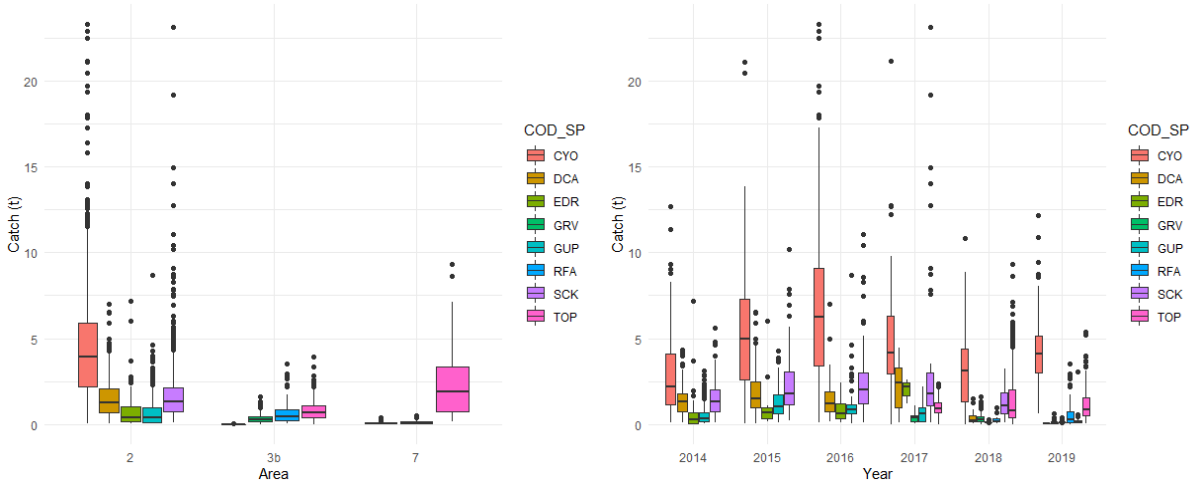
Identification of all deep-seas harks to the lowest taxonomical level is not possible where no scientific observer is onboard. Surveys with observer coverage identify most of the sharks to the species level. All fishing targeting Patagonian toothfish has a 100% observer coverage.

In Table 4, specific catch composition is shown for the last six fishing seasons (2014-2019) including the areas where the catches occurred.

Table 4. Specific catch composition (%) by year and area for the EU-Spain fleet (2014-2019). (Under review)

Species/Year	2014	2015	2016	2017	2018	2019	Area 2	Area 3b	Area 7
Beryx spp	0.11	0.03					0.03		
Centrophorus granulosus	6.95	7.04	4.04	1.64	0.27	0.34	4.49		
Centrophorus squamosus					6.99	5.78	1.68		
Centroscymnus coelolepis	33.06	48.70	69.35	43.07	37.92	55.33	52.53	0.02	
Dalatias licha	22.36	19.27	14.48	15.20	15.66	0.99	19.33		
Deania calcea	20.59	15.31	7.11	7.51	1.09	0.01	11.31		
Epigonus telescopus	0.51						0.10		
Etmopterus spp	1.35	0.99	1.51	10.25	4.08	14.62	3.59	2.06	
Helicolenus spp	0.01	0.004					0.00		
Lophiidae	0.27	0.58	0.23	0.24			0.30		
Mora moro	10.42	6.75	3.08	3.88	0.37	1.20	5.30	0.30	
Paralithodes spp	2.53	0.56					0.65		
Polyprion americanus		0.04				0.53	0.01		
Pseudopentaceros richardsoni	1.85	0.73	0.20	0.43			0.68		
Ruvettus pretiosus	0.01						0.002		
Dissostichus eleginoides				10.07	27.46	16.53		55.46	99.81
Macrourus spp				2.89	3.42	0.71		19.17	0.13
Amblyraja taaf				1.99	0.69	3.58		7.53	0.03
Coryphaenoides spp				0.01	0.0005			0.03	
Antimora rostrata				2.81	2.37	0.39		15.42	0.03

In Figure 3 is presented the catch of the 8 main species (*) caught by area and year. Portuguese dogfish (CYO) has been the main species of the catch during this period, being fished mainly in Area 2. However, at the end of 2017 the EU-Spain vessels fishing in the CA have started fishing operations in Areas 3b and 7, targeting Patagonian toothfish.



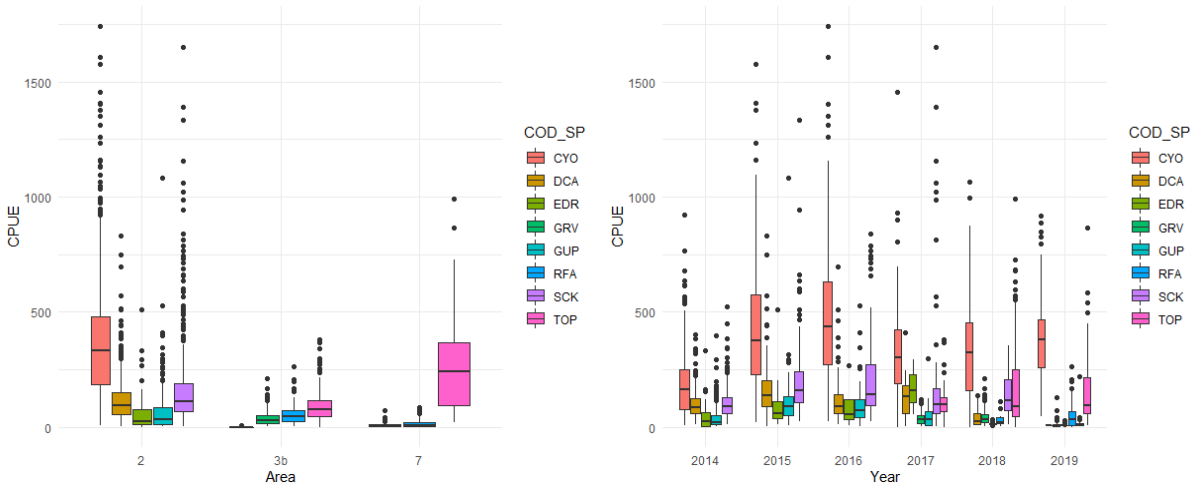
*CYO: *Centroscymnus coelolepis*, DCA: *Deania calcea*, EDR: *Pseudopentaceros richardsoni*, GRV:*Macrourus* spp, GUP: *Centrophorus granulosus*,
RFA: *Amblyraja taaf*, SCK: *Dalatias licha*, TOP: *Dissostichus eleginoides*.

Figure 3.- Species catch by area (left) and year (right) of the 8 most abundant species taken from the EU-Spain fleet (period 2014- 2019).

CPUE

The highest CPUE (catch by 1000 hooks) has been reached fishing the portuguese dogfish (CYO) that is fished mainly in area 2, where in 2016 reached 1740 k/1000 hooks, being the mean CPUE for CYO during all period (2014-2019) 358 k/ 1000 hooks (Figure 4).

In DelCano rise and Wliiams ridge the main species caught is the Patagonian toothfish, with a mean CPUE of 146 k/1000 hooks and a maximum of 989 k/1000 hooks in a set hauled in 2018.

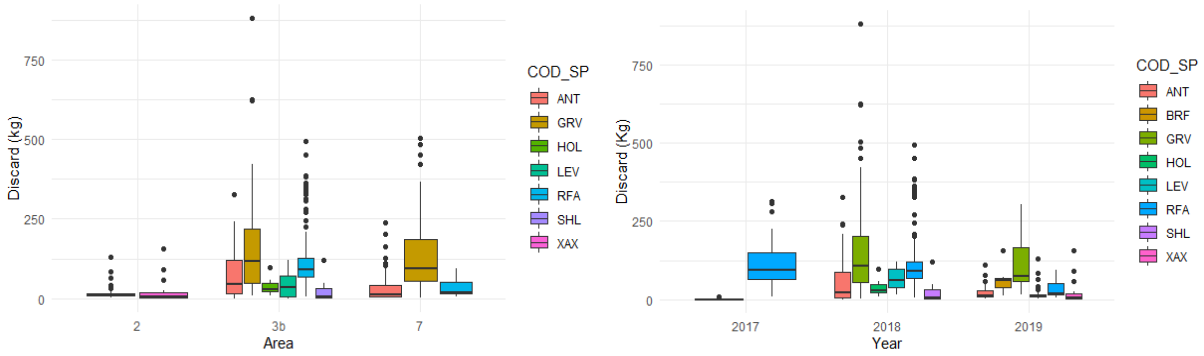


CYO: Centroscymnus coelolepis,* DCA*: Deania calcea,* EDR*: Pseudopentaceros richardsoni,* GRV:*Macrourus* spp, GUP: *Centrophorus granulosus*,
RFA: *Amblyraja taaf,* SCK: *Dalatias licha*, TOP: *Dissostichus eleginoides*.

Figure 4.- CPUE (k/1000 hooks) by area (left) and year (right) of the EU-Spain fleet (period 2014-2019).

Discards

Grenadiers (GRV), Skates (RFA) and Antimora (ANT) are the main discarded species (Figure 5). Although discards are unusual, the eight more discarded species (*) are shown by area and year.



*ANT: Antimora rostrata, BRF: Helicolenus dactylopterus,GRV: Macrourus spp, HLO: Chimaera monstrosa, LEV: Lepidion spp , RFA: Amblyraja taaf,
SHL: Etmopterus spp, XAX: Anguilliforme

Figure 5.- Species discards by area (left) and year (right) of the 8 most abundant species taken from the EU-Spain fleet (period 2017- 2019).

Fisheries data collection and research activities

EU-Spain data were obtained from different sources: declaration system, records from the master and scientific observation, when available.

The EU has contributed to the scientific work of SIOFA through various voluntary contributions. In addition, it has undertaken and contributed to a range of scientific activities that have been presented (or will be presented) to the SIOFA and CCAMLR SCs, including on toothfish fisheries such as:

López-Abellán in 2005 has presented a document to CCAMLR about an Spanish Patagonian toothfish fishery in the statistical FAO area 51: « Patagonian toothfish in international waters of the Southwest Indian ocean (statistical area 51) » that has been published in CCAMLR Science, Vol. 12 (2005): 207-214.

Also, several analysis of the Patagonian toothfish stock in the SIOFA CA from data collected from observers on board vessels that operated between 2017 and 2019 in SIOFA 51.7 and 57.4 areas have been presented both in SIOFA WG-SERA-19 (Sarralde and Barreiro, 2019) and CCAMLR WG-FSA-19 (Sarralde et al, 2019).

An analysis of tag recaptures in the SIOFA convention area from Patagonian toothfish tagged in the CCAMLR convention area was presented at CCAMLR WG-FSA-18 (Sarralde and Barreiro, 2018).

An analysis of the Marine Mammal interaction with fishing activities targeting Patagonian toothfish was also undertaken (CCAMLR, Gasco et al., 2019)

Two other documents are expected to be presented at SERAWG and/or the SIOFA Scientific Committee In March 2020:

Gasco N, Tixier P, Massiot-Granier F, Péron C, Selles J, Sarralde R, Soeffker M. 2020. No boundaries for whales interacting with fishing activities targeting Patagonian toothfish. SERAWG-2020.

Sarralde R, F. Massiot-Granier2, J. Selles2, M. Soeffker, 2020. Preliminary analysis of the Patagonian toothfish fishing data of the Del Cano Rise SIOFA. SERAWG-2020.

VME Thresholds

The EU-Spain bottom longline fleet is applying the rules adopted by the Fishing Administration, similar to those applied in SEAFO and CCAMLR in the definition of the VME encounter and thresholds, together with the protocols adopted by SIOFA in the CMM 2019-01. These measures are reflected in the following indications to the fishing vessels *:

"It is considered an encounter with Vulnerable Marine Ecosystems (VME) when the occurrence of VME indicators exceeds the established limits.

Vulnerable Marine Ecosystem (VME) indicators are considered:

- *live corals (coral species identified as antipathari, gorgonians, cerianthids, lophelias, and sea pens).*
- *live sponges.*

<u>When using the bottom longline will be taken into account:</u>

- *It is considered an encounter with Vulnerable Marine Ecosystems (VME) when 10 or more indicator units of a VME have been recovered in a single line section.*
- *A VME indicator unit refers to a liter of VME indicator organisms that can be placed in a 10-liter container, or one kilogram of VME indicator organisms that do not fit into a 10-liter container.*
- *A "line section" is a section of the line with 1,000 hooks or a section of 1,200 m in length, whichever is the shorter.*

***<u>In case of encounter with VME indicators, the captain of the vessel</u>**:*

- *Quantify the species of the VME indicator, namely sea pens, coral and sponge.*
- *If the number of VME indicators exceeds the limits indicated above per set of fishing:*
  - *According to Annex 1 of CMM 2019-01, it will indicate the incident to the General Secretariat of Fisheries.*
  - *According to point 13(b) of CMM 2019-01, 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. "*

**Translation from Spanish instructions*

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Four fishing surveys have been monitoring VME encounters with scientific observers onboard from 23/09/2017 to 29/09/2019 following the SIOFA and the Spanish fishing Administration protocol.

The maximum encounters (in kg) by taxa* in a line segment randomly selected for sampling, from the last Spanish surveys (from 2017 to 2019) in the SIOFA areas are shown in Table 5. It has never been reached the threshold of 10 or more VME indicator units by segment (the maximum has been 6 units of Euryalida in the 3b area).

Table 5. Maximum VME indicators weight (kg) encountered by taxa in a segment and SIOFA area from 2017 to 2019.

	Area		
	2	3b	7
AQZ		0.2	0.26
ATX	0.4	0.38	0.67
BZN		0.2	
CSS		0.65	0.84
CWD		0.04	0.13
DMO		0.51	0.30
GGW	1.34	2.37	3.50
HXY		0.03	
NTW		0.06	
OEQ		5.5	0.38
OOY		0.38	
PFR		0.2	0.33
QGX			0.43

*AQZ:Antipatharia; ATX:Actiniaria; BZN:Briozoan; CSS:Scleractinia; CWD:Stalked crinoids; DMO: Demospongiae; GGW: Gorgonacea; HXY: Hexactinellida; NTW: Pennatulacea; OEQ: Euryalida; OOY Ophiurida; PFR: Porifera; QGX: Spongia spp;

From the 677 surveyed lines during these 4 surveys, a total of 125 VME indicator encounters have been quantified from 70 lines. Their location is mapped in Figure 6 together with the hauled weight (k).

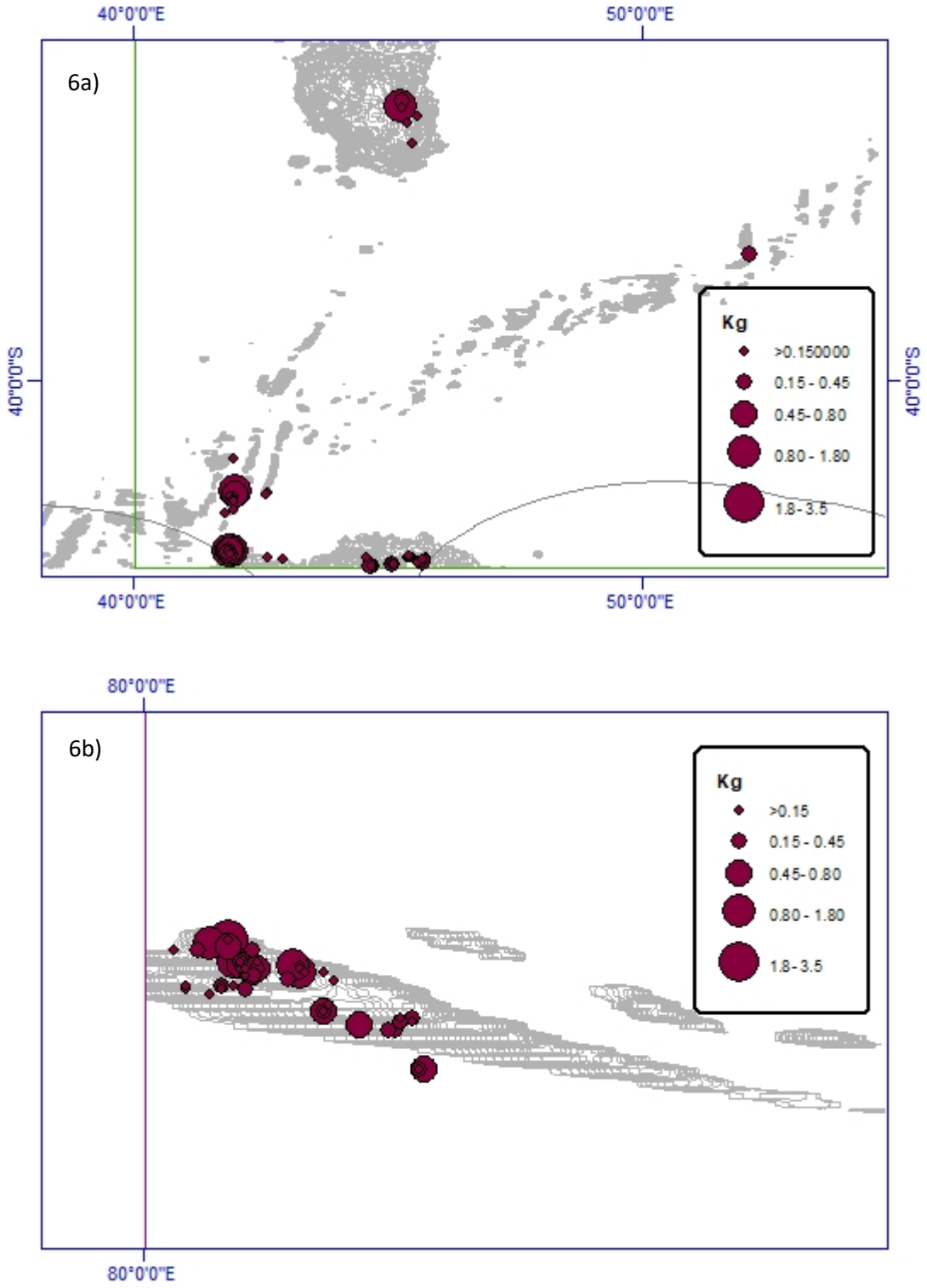

Figure 6. EU-Spain 2017-2019 VME encounters (kg) by random segment sampled. SIOFA areas 2 and 3b in the Figure 6a and area 7 in Figure 6b

Biological sampling and length/age composition of catches

Biological and size composition samplings are only conducted by scientific observers on board the Spanish vessels in 2017, 2018 and 2019. This information still needs to be revised, to proceed with the analysis and elaborate the results, that will be delivered through working documents.

Description of data verification mechanisms

Data from EU-Spain fleet are reviewed searching for outliers on catch and effort data; species names; and fishing set position errors. In the periods where scientific observation is available, data from the vessels are contrasted with the observer's data. Vessels are also controlled through VMS positioning system.

Summary of observer and port sampling programs

EU-France vessels are under the scientific observation system of the IOTC. In addition, the obligation to carry observer to cover 20% of the activity is defined in the "arrêté du 25 février 2013 portant création des autorisations de pêche ORGP pour certaines pêcheries non contingentées ou contingentées soumises à des mesures de gestion adoptées dans le cadre de certaines organisations régionales de gestion de la pêche". A traning program has been developed for SIOFA observers, and observers identified that can go on board the SIOFA licensed longliners. As no autorisation was requested for 2019, the program was not implemented in 2019.

Scientific observers have been deployed on board the one EU-Spain fishing vessels operating in the region in 2019. Reports on the scientific observations were prepared and provided to SIOFA Secretariat, and also information on toothfish fishery tag recovering were delivered. The observers were on board during 282 fishing days, which means 100% of observation coverage. The scientific observer (Biologist or Marine Science degree) are part of the personnel trained at the *Instituto Español de Oceanografía*, specific training is also adapted for all fleets.

EU-Spain doesn't have a port sampling program for vessels fishing within the SIOFA CA.