Annex 5

SOUTH EAST ATLANTIC FISHERIES ORGANISATION (SEAFO)

REPORT OF THE SEAFO SCIENTIFIC COMMITTEE

28th September – 7th October 2011

Scientific Committee of SEAFO
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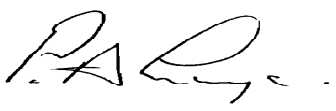

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Chairperson of Scientific Committee
Mr. Phil Large

1 OPENING OF THE MEETING

The 7th Annual Meeting of the SEAFO Scientific Committee (SC) was convened on 28th Sept to 7th October October 2010 at the Safari Court Hotel Conference Centre, Windhoek, Namibia. Due to the temporary absence of theChairperson, Mr P. Large, for the first three days of the meeting, the Vice Chairperson, Mr. R. Cloete, opened the meeting and welcomed delegates.

2 ADOPTION OF AGENDA AND MEETING ARRANGEMENTS

SC adopted the provisional agenda with only minor revisions. Members were informed of practical arrangements for the meeting by the Executive Secretary.

3 APPOINTMENT OF RAPPORTEUR

The chairperson appointed Mr. E. Maletzky as rapporteur to take minutes for the Scientific Committee report.

4 INTRODUCTION OF OBSERVERS

No observers were present.

5 INTRODUCTION OF PARTICIPANTS

The Chairperson requested participants to introduce themselves (see Appendix A for list of participants).

6 UNDERTAKE REVIEW OF SUBMITTED SEAFO RESEARCH DOCUMENTS AND ANY RELATED PRESENTATIONS

No documents were submitted.

7 EXAMINE, WHERE APPROPRIATE, ASSESSMENTS AND RESEARCH DONE BY NEIGHBOURING ASSESSMENT AND MANAGEMENT ORGANISATIONS

No assessments were received from Coastal States. No new stock assessments of Patagonian toothfish were available from CCAMLR – the next assessment will be in October 2011.

8 REVIEW PROVISIONAL OUTCOMES FROM UNGA TECHNICAL WORKSHOP HELD IN NEW YORK IN SEPTEMBER 2011

A Workshop was held at the UN Headquarters in New York on 15 and 16 September 2011, during the first round of informal consultation on the draft resolution of the General Assembly on sustainable fisheries. Participants in the Workshop discussed the implementation of paragraphs 80 and 83 to 87 of Resolution 61/105 and paragraphs 117 and 119 to 127 of Resolution 64/72 on sustainable fisheries, addressing the impact of bottom fishing on vulnerable marine ecosystems (VMEs) and the long-term sustainability of deep-sea fish stocks.

Participants from, but not representing SEAFO SC, were Mr. L. Abellan (EU – Spain), Mr. P. Large (EU – UK) and Mr. O.A. Bergstad (Norway).

At the workshop, a representative of the PEW Foundation gave a review of RFMO performance concerning applying the UNGA resolutions. The criteria used were [1] the presence or absence of Impact Assessments; [2] presence or absence of VME closure areas; [3] the effectiveness of VME thresholds and move-on rules; and [4] the sustainability of fish stocks. The RFMOs represented at the workshop were given an opportunity to respond to the review, but due to funding constraints SEAFO was not represented by the Executive Secretary. SC is of the view that a response from SEAFO should be given and the response of SC is described below for consideration by the Commission.

Impact assessments:
It was reported by PEW that none have been completed and that they were only required '*where possible*'.

SC confirms that no impact assessments have been submitted to SC for evaluation.

SC appends for information point 14 of the SEAFO Conservation Measure 17-09 which relates to bottom fishing in new bottom fishing areas:

"14. Assessments shall follow the procedures below:
(i) Each Contracting Party proposing to participate in bottom fishing shall submit to the Executive Secretary information and an initial assessment, where possible, of the known and anticipated impacts of its bottom fishing activities on vulnerable marine ecosystems, in advance of the next meeting of the Scientific Committee. These submissions shall also include the mitigation measures proposed by the Contracting Party to prevent such impacts. The Executive Secretary shall promptly forward these submissions to the Scientific Committee and the Commission."

Therefore SC considers that the interpretation made by PEW is incorrect, but recognizes that in the existing Conservation Measure there is scope for mis-interpretation.

Area closures:
It was reported by PEW that there was '*moderate*' coverage by area closures; *eleven areas where VMEs are known to likely occur have been closed to bottom fishing; areas where most fishing has occurred over the last 15 years remains open to bottom fishing; substantial areas of seamounts and ridge systems at fishable depths open; given the biogeography most features rising to depths <2000m potentially harbor VMEs*.

In relation to closed areas, SC notes that seamounts closed in the SEAFO CA represent 19% of total seamounts and 27% of seamounts with a summit shallower than 2000 m depth. The total closed area corresponds to 14% of the bottom area shallower than 2000 m in the CA.

Therefore, it is broadly accurate to say that only a moderate amount of the SEAFO CA has been closed. However the closed areas defined have either not been exploited or have been slightly exploited (noting that a small number of slightly exploited seamount areas were left open). Seamount areas that had already been exploited were allowed to be open for fishing. In addition SEAFO introduced new closed areas on the Mid-Atlantic Ridge and also introduced measures considered to protect possible sites of chemosynthetic activity.

Move-on rules:
It was reported by PEW that these were '*ineffective' in that they require 60kg of live coral and 800kg of sponges. No encounters were reported.*

SC supports the view that the current move-on rules are ineffective in that they were developed in NAFO and are applicable to trawlers. Most of the fishing activity in the SEAFO CA is by fixed gears and SC under ToR 21 below recommends revised move-on rules and VME thresholds for the SEAFO CA based on current CCAMLR protocols.

SC confirms that no encounters have been reported using the current VME thresholds. SC notes that the range of reported coral and sponge bycatch per tow/set in the SEAFO CA is 5g to 4.5kg, and 2g to 6.8kg, respectively.

Sustainability of fish stocks:
It was reported by PEW that the sustainability was '*possibly*' *ensured by relatively restrictive quotas for 2011 target deep-sea species: orange roughy, alfonsino, toothfish and red crab; status of deep-seas stocks unknown; insufficient data for stock assessments*.

SC broadly agrees with these points but wishes it noted that current TACs have been set at precautionary levels, taking account that the status of stocks is uncertain and that there has been extensive historical fishing in parts of the SEAFO CA.

9 REVIEW OF REPORT BY THE EXECUTIVE SECRETARY PRESENTING ALL LANDINGS, INCIDENTAL BY-CATCH AND DISCARD TABLES UPDATED TO INCLUDE 2010 AND 2011 TO-DATE.

The Executive Secretary presented available data and related information. These were updated with additional information made available by members.

Catch statistics for the SEAFO CA are incomplete. A table with the available data from 1995 to 1998 was listed in the report of the 1st annual meeting of the Commission (SEAFO, 2004). These data were based on a report by Japp (1999). Some data were derived from the "1975-2005 FAO Southeast Atlantic capture production database" and are added to the current tables on landings below in bold.

The quality and quantity of data from active fishing vessels continues to improve. Historically there was no distinction between landings and catches, however discard information is now available for vessels of some CPs fishing in the SEAFO CA. Data recorded by observers also include bycatch information as well as incidental catches such as seabirds, turtles and marine mammals (none were recorded for 2010-2011 to date). Observers indicated that in 2011 to date only very small amounts of fishing gear (126m of line containing 504 hooks)were lost in the Patagonian toothfish (*Dissostichus eleginoides)* fishery. An outstanding issue is that vessels using mid-water trawls catching Alfonsino (*Beryx splendens*) and Pelagic Armourhead/Southern Boarfish (*Pseudopentaceros richardsoni*) do not record discards by species, although data are available for all species combined.

Historically, the following countries are known to have been fishing in the SEAFO Area *viz*. Spain, Portugal, Russia, Cyprus, Mauritius, Japan, Korea, Poland, Norway, South Africa and Namibia. In 2010 and 2011 to date, the only countries that have provided landings data for the SEAFO CA were Japan, Korea, EU (Spain), South Africa and Namibia. VMS data and catch reports suggest that these were the only vessels fishing for SEAFO species in the SEAFO CA.

The existence and extent of any Illegal, Unreported and Unregulated (IUU) fishing in the SEAFO CA is unknown.

Landings for the five main species are listed by country, fishing method and SEAFO Division in Tables 1-6. Tables 7-14 list the bycatch species.

EU (Spain):
Landings data were provided for the years 2001-2010. No landings have been made in 2011 to date (Tables1, 3, 4 & 5). From 2001 to 2003, landings were small with the exception of around 100 t of Patagonian toothfish). Landings of toothfish in 2010 amounted to 26t and this was taken by a single vessel.

EU (Portugal):
Landings data were provided for 2004 to 2007. No landings have been made since 2007 (Tables 3 & 4).

Japan:
Landings data were provided from 2003 to 2011 to-date (Tables1 & 4). Provisional landings for 2011 to date are 178t for Patagonian toothfish. No fishing for red crab has taken place during 2011 to date.

Republic of Korea:
Landings data were provided from 2005 to 2011 to-date (Tables 1, 3 & 5). The mid-water trawl fishery, catching alfonsino and boarfish, which restarted in 2010, continues in 2011. However landings to date are comparatively small because the fishery this year has only just started. There was no fishing for Patagonian toothfish in 2010 and 2011to date.

South Africa:
Landings data were provided for 1976-2011 (Tables 1, 2, 3 & 5). In 2011South Africa has landed 30t of Patagonian toothfish thus far.

Namibia:
Landings data were provided from 1976 to 2011 (Tables 2, 3, 4, 5 & 6). The only landings in 2011 to date have been of red crab.

Other Countries:
Landings data for other countries are summarised in the various tables.

Discards: Available data of discards are presented in Table 15.

Table 1. Landings (t) of Patagonian toothfish (*Dissostichus eleginoides*).

Management Area	**D**		**D**		**D**		**D**	
Nation	**EU (Spain)**		**Japan**		**Korea**		**South Africa**	
Fishing method	**Longline**		**Longline**		**Longline**		**Longline**	
Catch details	**Landings***	**Effort****	**Landings***	**Effort****	**Landings***	**Effort****	**Landing***	**Effort****
2002	18	214						
2003	101 (14)	(135)	47		245			
2004	6	313	124					
2005	N/F	N/F	158		10			
2006	11	204	155					
2007	N/F	N/F	166					
2008	N/F	N/F	122		76	1314		
2009	N/F	N/F	86		65	1037		
2010	26	455	54	307				
2011***	N/F	N/F	178	792	N/F	N/F	30	196

Partial effort data refers to partial catch in brackets ( ).
N/F means no fishing. Blank fields mean no data available.
*Whole weight
**1000 hooks
***Provisional (September 2011)

Table 2. Landings (t) of orange roughy (*Hoplostethus atlanticus*). Values in *italics* are taken from the Japp (1999).

Management Area	B1	A1	B1?
Nation	Namibia	Norway	South Africa
Fishing method	Bottom trawl	Bottom trawl	Bottom trawl
1995	40	N/F	
1996	8	N/F	
1997	5	22	*27**
1998	N/F	12	
1999	<1	N/F	
2000	75	0	
2001	94	N/F	
2002	9	N/F	
2003	27	N/F	
2004	15	N/F	
2005	18	N/F	

*Sum of landings from 1993 to 1997. There has been no fishing since 2005.
N/F = no fishing. Blank fields = no data available.

Tables 3 a and b (below). Landings (t) of alfonsino (*Beryx splendens*) made by various countries. Values in *italics* are taken from the Japp (1999). Values in bold are from FAO.

Management Area	B1	A1	Unknown	Unknown	Unknown	A, B & C
Nations	Namibia	Norway	Russia	EU(Portugal)	Ukraine	Korea
Fishing method	Bottom trawl	Bottom trawl	Bottom trawl			Mid-water trawl
1976			*252*			
1977			*2972*			
1978			*125*			
1993					**172**	
1994						
1995	*1*	N/F				
1996	*368*	N/F			**747**	
1997	*208*	836	*2800*		**392**	
1998	N/F	1066	**69**			
1999	1	N/F		**3**		
2000	<1	242		**1**		
2001	1	N/F		**7**		
2002	0	N/F		**1**		
2003	0	N/F		**5**		
2004	6	N/F	210			
2005	1	N/F	54			
2006	N/F	N/F	N/F	<1		
2007	N/F	N/F	N/F	N/F	N/F	N/F

2008	N/F	N/F	N/F	N/F	N/F	N/F
2009	N/F	N/F	N/F	N/F	N/F	N/F
2010	N/F	N/F	N/F	N/F	N/F	191
2011*	N/F	N/F	N/F	N/F	N/F	162

*Provisional (September 2011). *N/F means no fishing. Blank fields mean no data available.

Main species	**Alfonsino (continued)**					
Management Area Nations Fishing method	**EU (Spain) MWT /BLL**	**Poland**	**Unknown Cook Island Bottom trawl**	**Unknown Mauritius Bottom trawl**	**Unknown Cyprus Bottom trawl**	**B1? South Africa Bottom trawl**
1995		**1964**				*60*
1996						*109*
1997	**186**					*124*
1998	**402**					
1999						
2000						
2001	2					
2002						
2003	2					
2004	4		142	115	437	
2005	72					
2006	N/F	N/F	N/F	N/F	N/F	N/F
2007	N/F	N/F	N/F	N/F	N/F	N/F
2008	N/F	N/F	N/F	N/F	N/F	N/F
2009	N/F	N/F	N/F	N/F	N/F	N/F
2010	N/F	N/F	N/F	N/F	N/F	N/F
2011	N/F	N/F	N/F	N/F	N/F	N/F

N/F = no fishing. Blank fields = no data available.

Table 4. Landings (t) of deep-sea red crab (considered to be mostly *Chaceon erytheiae*).

Management Area	**B1**		**B1**				**A**	
Nations	**Japan**		**Namibia**		**EU (Spain)**		**EU (Portugal)**	
Fishing method	**Landing**	**Effort**	**Landing**	**Effort**	**Landing**	**Effort**	**Landing**	**Effort**
2001					<1			
2002								
2003					5			
2004					24			
2005	234		54					
2006	389							
2007	770		4				35	
2008	39							
2009	196		N/F	N/F	N/F	N/F	N/F	N/F
2010	200	72	N/F	N/F	N/F	N/F	N/F	N/F
2011**	N/F	N/F	160	47	N/F	N/F	N/F	N/F

*Units of Effort is number of pots x 1000. ** Provisional (September 2011).

Table 5. Landings (t) of armourhead (*Pseudopentaceros richardsoni*). Values in bold are from FAO.

Management Area Nations Fishing method	**B1 Namibia B. trawl**	**B1 Russia B. trawl**	**Unknown Ukraine B. trawl**	**B1 South Africa B. trawl**	**B1 EU (Spain) B. trawl & longline**	**Unknown Cyprus B. trawl**	**B1 Korea Mid-water Trawl**
1976		108					
1977		1273					
1978		53					
1993		1000	**435**				
1994							
1995	8		49	530			

1996	284		281	201			
1997	559		18	12			
1998	N/F						
1999	N/F						
2000	20						
2001	N/F				<1		
2002	N/F						
2003	4				3		
2004					3	22	
2005							
2006							
2007							
2008							
2009	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2010	N/F	N/F	N/F	N/F	N/F	N/F	914
2011*	N/F	N/F	N/F	N/F	N/F	N/F	90

***** Provisional (September 2011)

Table 6. Landings (t) of oreo dories (*Allocyttus guineensis*, *Allocyttus verrucosus*, *Neocyttus rhombiodalis*, *Oreosoma atlanticum*).

Management Area **Nations** **Fishing method**	**UNKNOWN** **Russia** **?**	**UNKNOWN** **Cyprus** **?**	**UNKNOWN** **Mauritius** **?**	**UNKNOWN** **Namibia** **Bottom trawling**
1995				<1
1996				0
1997				35
1998				No fishing
1999				3
2000				33
2001				14
2002				1
2003				1
2004	<1	21	25	0
2005				4

*There have been no landings since 2005.

Table 7. Landings (t) of wreckfish (*Polyprion americanus*).

Management Area **Nations** **Fishing method**	**A** **EU (Portugal)** **Longline**
2004	1
2005	
2006	6
2007	9

*No landings since 2007.

Table 8. Landings (t) of blackbelly rosefish (*Helicolenus mouchezi*).

Management Area Nations Fishing method	A, B1, C Korea Mid-water trawl
2010	130
2011*	9

*Provisional (September 2011)

Table 9. Landings (t) of cape bonnetmouth (*Emmelichthys nitidus*).

Management Area Nations Fishing method	A, B1, C Korea Mid-water trawl
2010	11
2011*	0,3

*Provisional (September 2011)

Table 10. Landings (t) of imperial blackfish (*Schedophilus* spp.).

Management Area Nations Fishing method	B1 Korea Mid-water trawl
2010	24
2011*	7

*Provisional (August 2011)

Table 11. Landings (t) of silver scabbardfish (*Lepidotus caudatus*).

Management Area Nations Fishing method	B1 Korea Mid-water trawl
2010	30
2011*	6

*Provisional (September 2011)

Table 12. Landings (t) of oilfish (*Ruvettus pretiosus*)

Management Area Nations Fishing method	B1 Korea Mid-water trawl
2010	5
2011*	10

* Provisional (September 2011)

Table 13. Landings (t) of grenadiers (Macrouridae).

Management Area Nations Fishing method	D South Africa Demersal longline	D Japan Demersal longline
2011*	4	22

*Provisional (August 2011)

Table 14. Landings (t) of blue antimora (*Antimora rostrata*)

Management Area Nations Fishing method	D South Africa Demersal longline	D Japan Demersal longline
2011*	1	7

* Provisional (September 2011)

Table 15. Discards (kg) from all the fisheries in the SEAFO CA.

Management Area **Nation** **Fishing method**	**D** **EU(Spain)**	**D** **Japan**	**B** **Korea** **Mid-water trawl**	**D** **South Africa**
2010	ANT - 631 kg	TOP – 2439 GRV – 2058 ANT – 795 KCX - 30	Other** – 24 952	No Fishing
2011	NF	No data yet	Other** - 222	GRV – 4114 ANT - 1143

*TOP: Patagonian toothfish (*Dissostichus eleginoides*); GRV: (*Grenadiers nei*); ANT: (*Antimora rostrata*); KCX: King crabs

**Other include Bluenose warehou (*Hyperoglyphe antarctica*), Roudi escolar (*Promethichthysprometheus*), Surgeon grenadier (*Coelorinchus acanthiger*), King dory (*Cyttus traversi*), Blunthead puffer (*Sphoeroides pachygaster*), Sickle pomfret (none found), Pink frogmouth (*Chaunax pictus*), Devil anglerfish (*Lophius vomerinus*), Longspine bellowfish (*Notopogon xenosoma*), Groupers (Serranidae), Red codling (*Pseudophycis bachus*), Slender sunfish (*Ranzania laevis*), Yellowtails (*Elagatis bipinnulata*), Skipjack tuna (*Katsuwonus pelamis*), Albacore (*Thunnus alalunga*), Slender tuna (Allothunnus fallai), Smalltooth sand tiger shark (*Odontaspis ferox*).

10 REVIEW THE SPATIAL AND TEMPORAL DISTRIBUTION OF FISHING ACTIVITY USING ALL EXISTING INFORMATION INCLUDING OBSERVER AND VMS DATA

SC was again in a position to present a summary of available VMS data for vessels fishing for SEAFO species. These data are available from 2007, but only data for 2010 and 2011 to date are presented (Figures 1 and 2). These have been anonymized so that Contracting Parties and individual vessels cannot be identified. The figures also include the positions of individual hauls as recorded in observer reports.

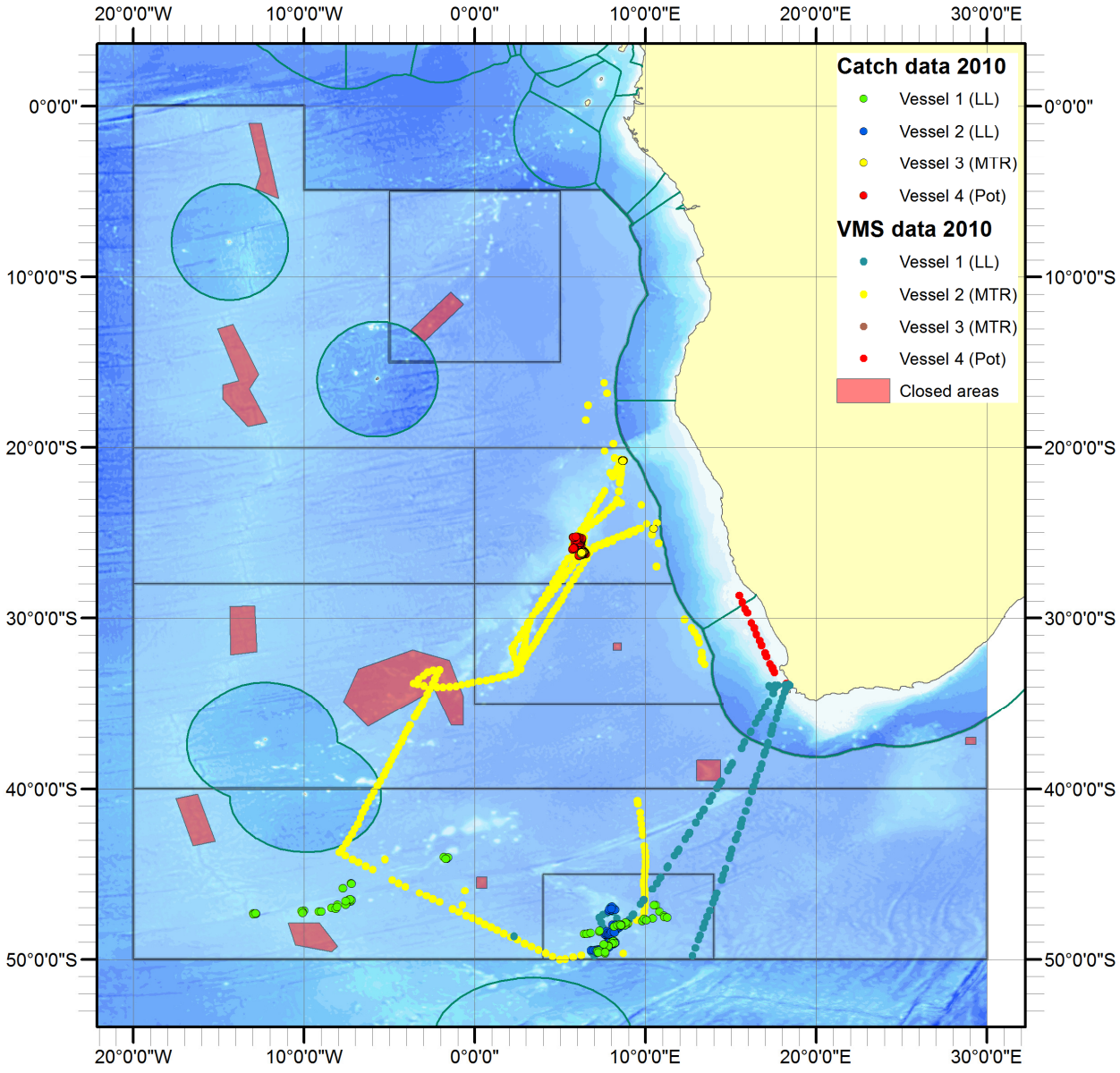

Figure 1. VMS and catch position data for longline (LL), mid-water trawl (MTR) and red crab (Pot) vessels that operated in the SEAFO CA in 2010. The area around Coastal States represents National EEZs. The SEAFO closed areas (in red) are those introduced in January 2011.

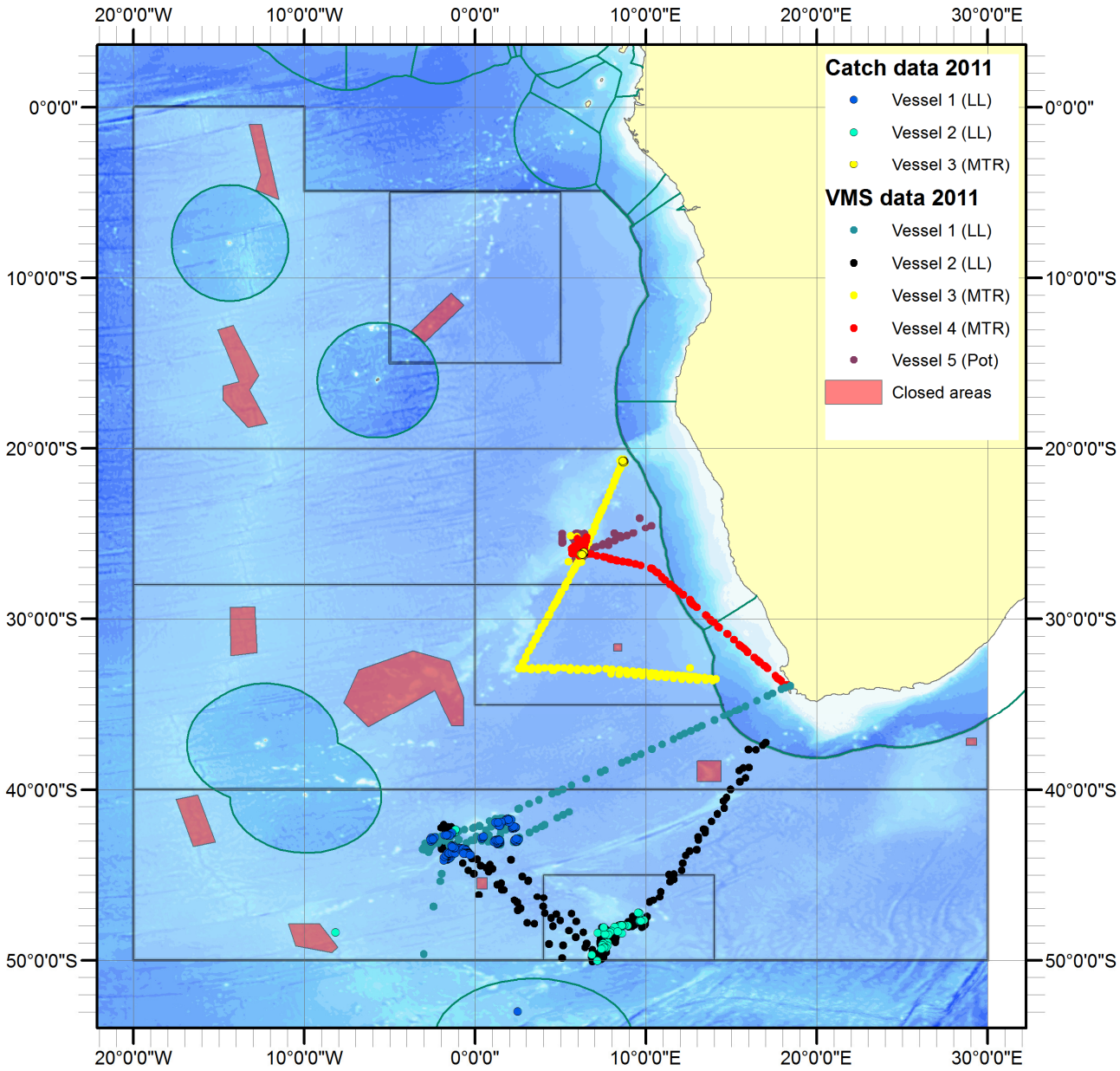

Figure 2.VMS and catch position data for longline (LL), mid-water trawl (MTR) and red crab (Pot) vessels that have operated in the SEAFO CA in 2011 to date. The area around Coastal States represents National EEZs. The SEAFO closed areas (in red) are those introduced in January 2011.

SC noted that the 2010 longline catch position data in some areas do not correspond to available VMS data (see Figure 1).

SC noted that some CPs experience difficulties in reporting VMS data by two-hourly intervals. The Executive Secretary agreed to refer this to the Compliance Committee.

11 REVIEW AVAILABLE RECORDS AND THE SPATIAL DISTRIBUTION OF REPORTED BYCATCH OF BENTHIC ORGANISMS (CORALS, SPONGES ETC.)

Available data for bycatches of live corals and sponges are presented in Tables 16-18.

Table 16. Bycatch (kg) of Gorgonians

Management Area Nations Fishing method	D Japan Demersal longline	D EU (Spain) Demersal longline
2010		47
2011*	4	2

*Provisional (September 2011)

Table 17. Bycatch (kg) of Scleratinia.

Management Area Nations Fishing method	D Japan Demersal longline	D EU (Spain) Demersal longline
2010		2
2011*	8	

*Provisional (September 2011)

Table 18. Bycatch (kg) of Porifera.

Management Area Nations Fishing method	D EU (Spain) Demersal longline
2010	30
2011*	

*Provisional (September 2011)

In addition to the above, the following bycatches were recorded by the Spanish demersal longliners fishing in 2010: Anthipatharia (4kg); Alcyonacea (2kg); Pennatulacea (1kg); Chemosynthetic (0.2kg).

There were no recorded instances in 2010 and 2011 of individual set bycatches exceeding the current VME threshold values (60kg for corals and 800kg for sponges). Set-by-set data for longliners fishing in 2010 showed an overall range of coral and sponge bycatch from 0.06 to 4.2kg (mean: 0.96kg) and 0.002 to 6.8kg (mean: 0.93kg), respectively. Set-by-set data for longliners fishing in 2011 showed an overall range of coral bycatch from 0.005 to 4.5kg (mean: 1.1kg). There have been no sponge bycatches reported in 2011 to date.

The spatial distribution of recorded bycatches of corals and sponges in 2010 and 2011 is shown in Figure 3.

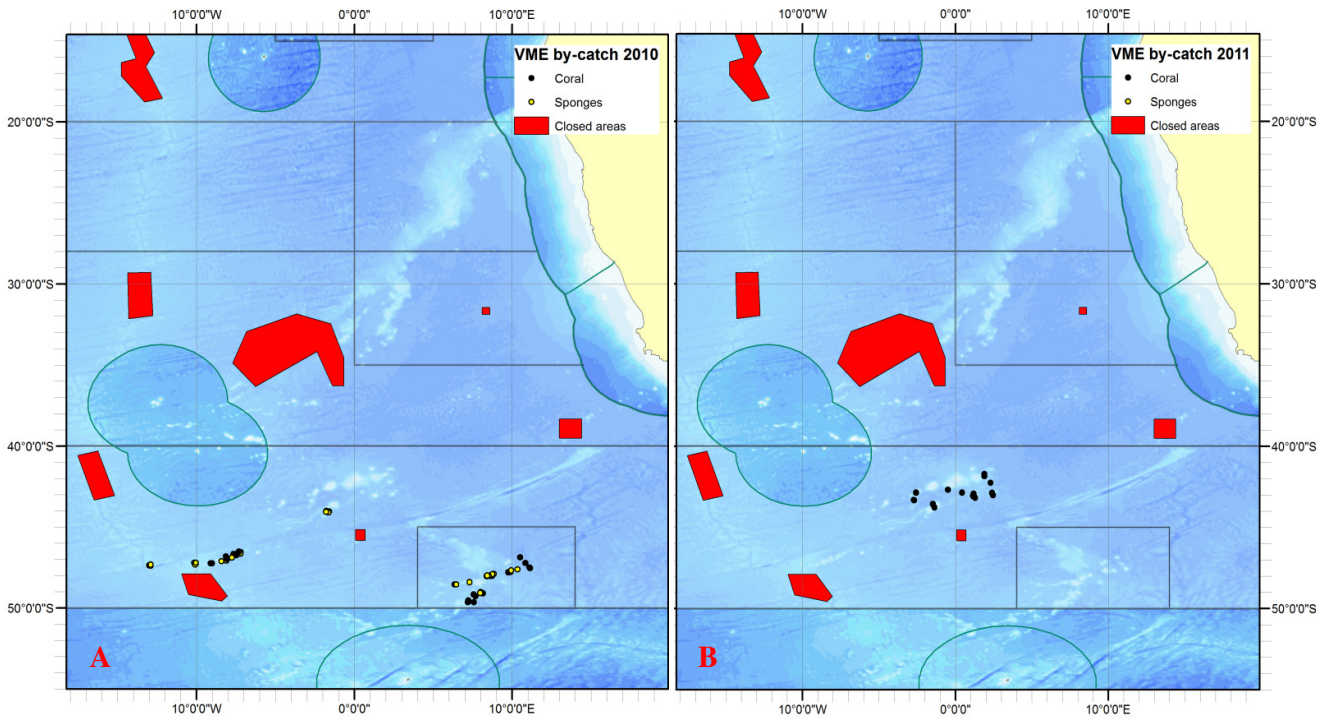

Figure 3. The spatial distribution of coral and sponge bycatches during 2010 (a) and 2011 (b).

In 2010, the main areas of coral and sponge bycatch were on the Meteor and southern part of the mid-Atlantic Ridge in Division D. In 2011 coral bycatches were recorded in the region of the Discovery Seamount.

12 COMPILE AND ANALYSE BIOLOGICAL AND CPUE DATA FOR THE MAIN FISH STOCKS INCLUDING ORANGEROUGHY, ALFONSINO, ARMOURHEAD/SOUTHERN BOARFISH, DEEP-SEA RED CRAB, PATAGONIAN TOOTHFISH, AND UNDERTAKE STOCK ASSESSMENTS WHERE APPROPRIATE.

Some validation problems were encountered with set-by-set catch and effort data and these require further investigation. The conclusions drawn from CPUE analyses and their use for stock assessment purposes should be considered with caution. The species catch and effort data from the SEAFO database are restricted to a relatively short time series, so any analyses presented should be considered preliminary.

12.1 Orange roughy

No new data were presented. A summary of the fishery in Sub-Division B1 (which stopped in 2005) and the related abundance index can be found in the 2010 SC Report.

12.2 Patagonian toothfish

Annual estimates of CPUE (kg/1000 hooks) for Patagonian toothfish (Figure 4) show an increase for two areas (D1 and Discovery Seamount in D) and a slight decrease in CPUE on the western part of D from 2009 to 2010 and stability thereafter. The increase in abundance at

Discovery is quite marked, but the number of sets used in the analysis were 3 (2009), 5 (2010) and 207 (2011) and therefore any trends should be interpreted with considerable caution. A further observation is that the Discovery Seamount was re-opened to fishing in 2011 and this may have resulted in displacement of effort to areas with higher abundance.SC considered the analyses presented do not provide a robust basis to evaluate the status of the stock in this area.

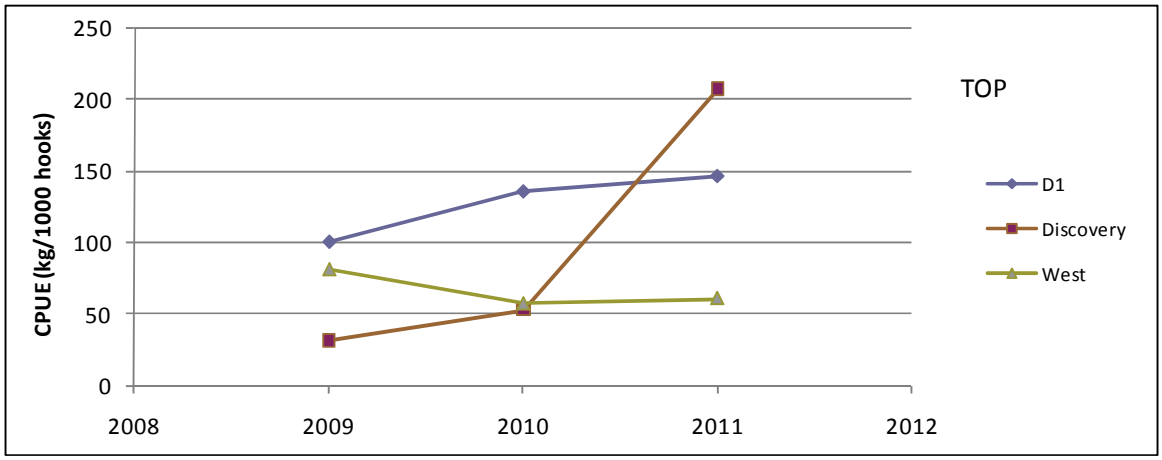

Figure 4. Trends in CPUE from Japanese longliners fishing for Patagonian toothfish.

12.3 Deep-sea red crab

Annual estimates of CPUE (kg/pot) for deep-sea red crab (*Chaceon* spp) from the Valdivia area are presented in Table 19. The vessels used in some years varied in nationality, vessel size and size of pots used, and consequently it was not possible to construct a standardized time series of abundance in order to evaluate the status of the stock.

Table 19.CPUE (kg/pot) for deep-sea red crab (*Chaceon* spp.) from the Valdivia area.

Year	kg/pot	*CV%*	*n (sets)*
2005	3.90	*21*	*157*
2007	1.31	*29*	*10*
2009	2.89		*156*
2010	2.82	*29*	*181*
2011	3.45		*105*

12.4 Armourhead/southern boarfish

Annual estimates of mid-water trawl CPUE for armourhead/southern boarfish from the Valdivia area are presented in Table 20. The fishery in 2011 commenced in September and any changes in abundance will be evaluated by SC in 2012.

Table 20. Mid-water trawl CPUE for armourhead/southern boarfish (*Pseudopentaceros richardsoni*) from the Valdivia area

Year	kg/trawl hour	*CV%*	*n (sets)*
2010	2464	*157*	*63*
2011	236	*89*	*14*

As an alternative, an exploratory assessment was carried out using a local depletion model widely used to explore stock dynamics of a range of species (Carle & Strub, 1978, Little *et al.*

2011). A key assumption of such models is that the stocks to which they are applied are discrete with no immigration or emigration during the period of fishing analyzed. Adults of this species inhabit steep and flat hard bottoms up to 800m deep on seamounts and underwater ridges in the open ocean. This species migrates to the summit of seamounts after approximately 4 years of pelagic life and aggregates (López-Abellán *et al.* 2008). A local depletion model may be appropriate for use here because catches of *P. Richardsoni* were from trawls carried out in 2010 in a small area (about 200km^2) on the top of Valdivia Bank (26º 11'S 6º 18'E) (Figure 5).

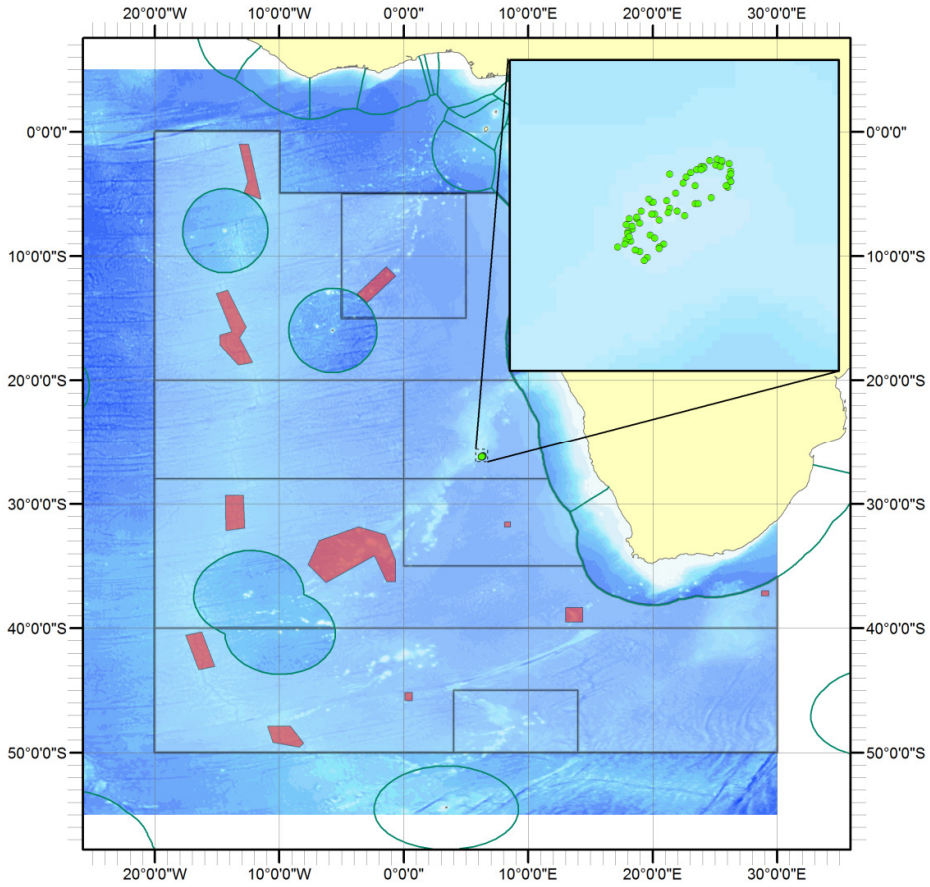

Figure 5. Inset shows positions of pelagic armourhead catches on Valdivia Bank during 2010.

The catches taken from this area largely comprise adult fish (length: 38cm plus) (Figure 6).

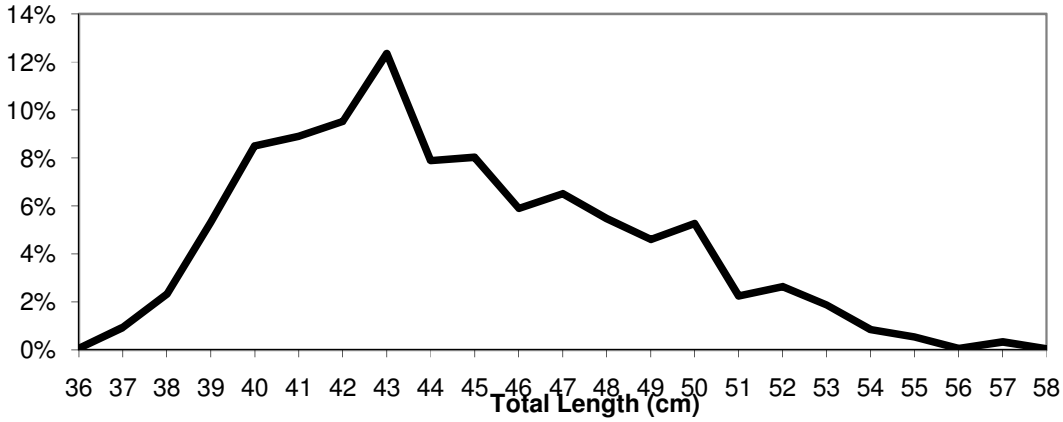

Figure 6. *Pseudopentaceros richardsoni* : length frequency distribution raised to catches taken on Valdivia Bank in Sept to Nov 2010.

It is know that maturity data were collected by observers on the vessels involved in this fishery, but because a reporting protocol currently does not exist for maturity data, these were not available to SC. Consequently, it remains unclear at the present time as to whether these aggregation comprise spawning fish (other species in this genus are known to aggregate for spawning).

Local depletion analysis assumes that there is no recruitment and no migration to the fished area during a particular season of fishing. Under these assumptions, catch rates will decline with continued fishing until all fish have been removed. A linear regression model is adjusted to CPUE and temporal cumulative catches. The results obtained can be used to estimate the total biomass at the beginning of the season, which corresponds to the total catch that equates to local extinction, i.e., point that cuts the x-axis (Fig. 7). The data used are derived from fishing hauls in which catches of *P. Richardsoni* represented more than 60% of the total catch. To obtain an estimate of uncertainty, 2000 bootstrap samples were taken from the data, allowing confidence intervals to be derived.

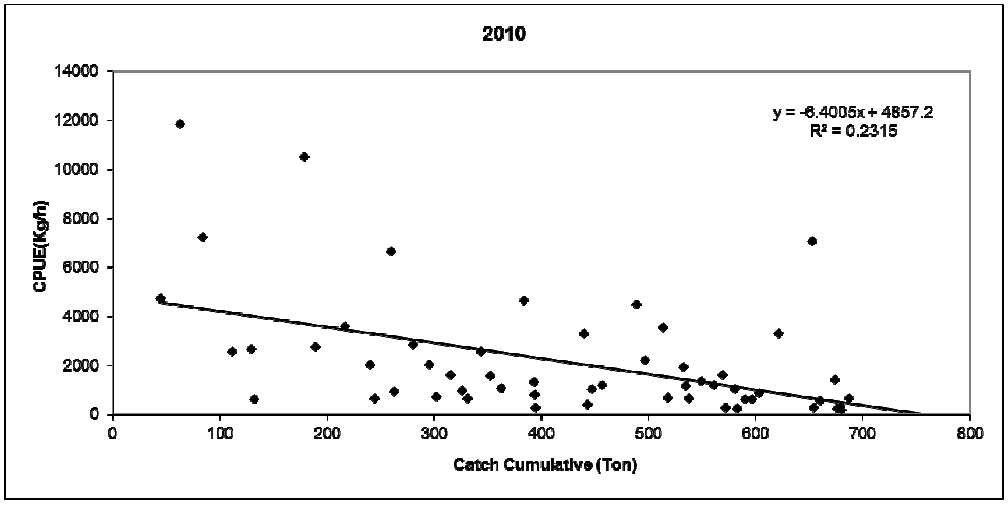

Figure 7. Depletion regression for armourhead on the Valdivia Bank (regression coefficients are for least squares fit and do not take into account bootstrapping).

The total local biomass at the beginning of the fishing season is estimated by bootstrapping to be around 800t (Table 21). This value broadly corresponds to the point where the regression line crosses the x-axis (Fig. 7). Whether this biomass comprises adult fish or spawning fish (SSB) can only be determined when maturity data become available.

Table 21. Summary statistics of total local biomass estimates derived from 2000 bootstrap re-sampling estimates.

1st Quartile	Median	3rd Quartile
704.4	759.5	850.9

SC noted that the correlation coefficient for the bootstrap fit (Table 22) is relatively low (0.34), however this is of similar magnitude to that observed in other applications of this model (Agnew *et al*. 2009).

Table 22. Summary statistics of biomassestimates derived from 2000 bootstrap re-sampling estimates.

1st Quartile	Median	3rd Quartile
0.2998	0.3440	0.3447

12.5 Other species

Annual estimates of mid-water trawl CPUE for alfonsino, blackbelly rosefish (*Helicolenus* spp.) andoilfish (*Ruvettus pretiosus*)from the Valdivia area and the northern Walvis Ridge are presented in Tables 23-28. The fishery in 2011 commenced in September and any changes in observed abundance will be evaluated by SC in 2012.

Table 23. Alfonsino (Northern Walvis Ridge)

Year	kg/trawl hour	CV%	n (sets)
2010	2931	123	11
2011	3809	81	11

Table 24. Alfonsino (Valdivia Bank)

Year	kg/trawl hour	CV%	n (sets)
2010	139	138	39
2011	292	153	3

Table 25. Blackbelly rosefish (Northern Walvis Ridge)

Year	kg/trawl hour	CV%	n (sets)
2010	187	111	3
2011			

Table 26. Blackbelly rosefish (Valdivia Bank)

Year	kg/trawl hour	CV%	n (sets)
2010	437	153	60
2011	80	61	11

Table 27. Oilfish (Northern Walvis Ridge)

Year	kg/trawl hour	CV%	n (sets)
2010	117	56	5
2011	245	42	7

Table 28. Oilfish (Valdivia Bank)

Year	kg/trawl hour	CV%	n (sets)
2010	43	78	9
2011	47	104	7

13 WHERE POSSIBLE, MAKE RECOMMENDATIONS AS TO THE STATE OF STOCKS AND CURRENT LEVELS OF FISHING ACTIVITY IN RELATION TO F_{MSY} (NOTING ANY UNCERTAINTIES AND ASSOCIATED RISKS).

No new information allowing an evaluation on the state of stocks was available to SC. The status of stocks in the SEAFO CA is unknown. Most stocks and fisheries remain data poor with an absence of sufficient time series abundance data to evaluate changes in stock status. Previously, SC had concluded that orange roughy in B1 was seriously depleted and there is no new information to review this interpretation.

MSY guidelines for data poor stocks were reviewed by ICES WKFRAME and WKPOOR and likely suitable methods will be evaluated by the ICES Deep-water Stock Assessment Working Group (WGDEEP) in March 2012. SC will review the outcomes of this work next year and identify and apply, where appropriate, suitable methods for SEAFO stocks. Consequently, current levels of fishing activity in relation to F_{msy} are unknown for SEAFO stocks.

Regarding armourhead, SC could not arrive at a consensus as to the content of management measures (precautionary TACs) for this species. Two opinions were expressed and these are given below.

OPINION A:-

In 2010 high landings of pelagic armourhead were recorded in area B1 and fishing activities have continued in 2011. This fishery occurs in a localized area of a single seamount and may therefore be vulnerable to rapid depletion. A further concern is that spawning aggregations of similar species of the same genus have been fished in the North Pacific to the extent where the reproductive viability of the remaining SSB has been compromised (Boehlert & Sasaki, 1988). Currently there are no management measures regulating catches of armourhead in the SEAFO CA. It is proposed that a precautionary TAC be applied to prevent the potential overexploitation of this stock. It is possible that similar fisheries may quickly develop on other seamount areas in the SEAFO area and any management measures introduced should also take this into account.

OPINION B:-

In the SEAFO CA, in the past 11 years (1998-2009), in most years there were almost no armourhead catches (refer to landing Table 5). In 2010, the mid-water fisheries catching armourhead newly started by **only one vessel**and two vessels are operating in 2011. Under such situation, it is scientifically very premature to establish the precautionary TAC. It is scientifically essential to obtain few more years catch data to evaluate if TAC needs to be established. There have been much **larger fisheries targeting armourhead** in other waters, such as the Emperor Sea Mount in the Pacific,

by **many numbers** of fishing vessels. As they caught a large amount of catch, long term moratoria were established in the past (e.g., 15 years in the Four Emperor Sea Mount). In the SEAFO CA, **only one vessel** just started fishing in 2010 after 11 years of almost no fishing. Thus, the situation is far different from those in other waters. Therefore it is scientifically essential to wait until a few more years catch statistics are available to evaluate if TAC needs to be established.

14 REVIEW PROGRESS REGARDING THE DEVELOPMENT OF SPECIES PROFILES.

There are currently three species profiles presented on the SEAFO website – orange roughy), Patagonian toothfish, and *Epigonus spp.* These continue to be work in progress and SC agreed that these will be revised intersessionally in line with a modified template to be uploaded on the website by the Secretariat. Final profiles should uploaded by 31 December 2011. Species profiles were allocated to SC members as follows:

Mr. L. Abellan – Patagonian toothfish and armourhead/Boarfish
Mr. E. Maletzky – Deep-sea red crab
Mr. R. Cloete – Orange roughy
Mrs. I. Figueiredo - *Epigonus* spp.

15 DRAFT A STATUS REPORT FOR PATAGONIAN TOOTHFISH AND DEVELOP PLANS FOR SIMILAR REPORTS FOR OTHER COMMERCIALLY IMPORTANT SPECIES.

A suggested format for status reports was developed (Appendix B). A preliminary status report for Patagonian toothfish was prepared (Appendix C). This status report is incomplete and will be finalized by the 2012 SC meeting.

SC agreed to recommend to the Commission that from 2012 onwards the format of the SC report will be modified so that species information is presented in individual status reports for the main species fished in the SEAFO CA. The Secretariat agreed to provide relevant landings, bycatch and discard tables to Stock Coordinators one month in advance of the 2012 SC meeting.

16 REVIEW OF PROGRESS RE DEVELOPMENT OF AN ID GUIDE FOR FISH, CRUSTACEANS, INCIDENTAL BYCATCH SPECIES.

A preliminary ID guide for the more common fish and invertebrate species was developed. However, SC are of the view that to develop a comprehensive ID guide which will cover a wider range of species likely to be relevant to the ecosystem approach to fisheries, there is a need to commission a consultant/specialist to carry out this work. This work should also include cetaceans and seabirds.

17 REVIEW PROGRESS RE THE DEVELOPMENT OF A COMPREHENSIVE LIST OF SPECIES FOUND IN COMMERCIAL AND RESEARCH CATCHES IN THE SEAFO CA.

SC revised the provisional list of SEAFO marine resources (Appendix D) to include species recorded in observer reports during 2010-2011. This list is work-in-progress and should not be regarded as a definitive list of marine resources in the SEAFO area. It was agreed that the Secretariat would upload the list to the SEAFO website.

18 REVIEW PROGRESS BY SECRETARIAT ON:

(i) Trialling methods suitable methods for excluding steaming time from VMS data

SC reviewed available information from NAFO and NEAFC regarding their protocols for differentiating between fishing and steaming.

In the NAFO area it is not required for vessels to indicate whether they are fishing or steaming at the moment the vessel position is reported. Thus, VMS position reports from NAFO vessels do not contain that information. When developing the fishing footprint, the NAFO Secretariat developed an algorithm to enable them to identify fishing positions. Speed was calculated from the positions and time between two consecutive position reports.A coordinate with a corresponding speed of between 1.0 and 4.0 knots was deemed to be fishing (WGDEC, 2008). Coordinates with corresponding speeds outside the 1-4 knot range were deemed to be either dodging bad weather or steaming. In 2010, it has become a requirement for NAFO vessels to provide speed information when sending position reports, but they are not required to indicate whether they are fishing or steaming.

In the NEAFC area fishing is identified on the basis of vessel speed. It is assumed that if a vessel does more than 5 knots between VMS points than it is steaming. If speed is lower than 5 knots it is assumed that it is fishing.

In SEAFO, vessel speed is currently not recorded in the VMS signature. Also there is no algorithm to calculate speed from VMS data to identify fishing.

SC decided to assume for all gears that fishing is taking place when vessel speed is <5 knots. SC acknowledges that this interpretation is not perfect but it is a step forward from the current situation where fishing cannot be differentiated from steaming. It was also agreed that attempts should be made to validate VMS positions using fishing position data recorded in observer and skipper logbooks.

A major problem at the moment with the VMS data reported to SEAFO is that the format of the latitude and longitude coordinates differs between vessels.

(ii) Accessing historical VMS data for NEAFC vessels fishing in the SEAFO CA

The Secretariat reported that they had obtained available historical VMS data for NEAFC vessels fishing in the SEAFO CA for the years from 2007 onwards. SC

was of the opinion that the majority of these data are for vessels fishing for ICCAT species. SC requested the Secretariat to liaise with NEAFC so that vessels targeting SEAFO resources can be identified in the dataset.

(iii) Development and maintenance of a SEAFO database

SC noted the progress made with the SEAFO database since the 2010 meeting. All the separate gear databases have been combined into a single database, but there is still a requirement to: [1] develop a required field (metadata) protocol; [2] include VMS data (as the VMS and biological datasets are currently separate); [3] develop a data validation protocol; and [4] further develop and maintain the SEAFO database. However, the current database workload is already too high for the existing resources available and the person carrying out these duties is due to retire in January 2012. Importantly the GIS expertise required for real-time mapping of vessel activity is not available in the Secretariat. As a consequence much of this work has had to be carried out by a member of SC outside the normal working hours of the meeting.

(iv) Development of excel-based observer forms

SC noted that some concerns have been expressed regarding the suitability of the new observer forms for efficiently transferring data to the SEAFO database. It was further noted that excel equivalents of the sampling forms should be made available on the website.

SC was made aware that the current reporting forms do not include fields for maturity and consequently the length-frequency forms were revised to include a field for sampled sex and maturity. Guidelines for sampling levels were also given.

(v) Development of the SEAFO website

SC welcomed the progress with re-designing the SEAFO website and the commitment to provide a full Portuguese translation. The website includes a members' only section for the Commission. SC is of the view that a similar facility should be accorded for the Scientific Committee.This section should also include all data relevant to analyses carried out by SC.

19 REVIEW PROGRESS REGARDING THE DEVELOPMENT OF A SEAFO SERIES OF WORKING DOCUMENTS.

SC welcomed the progress made regarding the compilation and referencing of SEAFO working documents. No new working documents have been submitted in 2011.

20 REVIEW OUTCOMES OF CONSULTATIONS BETWEEN SEAFO SECRETARIAT WITH SEAFO FISHING NATIONS REGARDING THE DEVELOPMENT OF MAXIMUM LIMITS ON THE LENGTH

OF FIXED GEAR FLEETS/SETS, SOAK TIME AND VESSEL GEAR CAPACITY.

The Executive Secretary stated that despite renewed requests only a limited response had been received from CPs and RFMOs. In view of the fact that only small amounts of lost and abandoned gear have been reported by observers in the SEAFO area, SC agreed to defer this issue pending monitoring the incidence of lost and abandoned gear in the short to medium term.

21 REVIEW THE CCAMLR EXPLORATORY FISHERIES APPROACH AND REGULATORY FRAMEWORK AND MAKE RECOMMENDATIONS REGARDING THE USE OF THE PRECAUTIONARY APPROACH WITHIN SEAFO.

Having considered outcomes of the recent UNGA workshop, SC noted that all RFMOs except CCAMLR may have to evaluate the appropriateness of current VME encounter provisions, threshold levels of VME indicators and the move-on rule.

In SEAFO the current fisheries are primarily conducted with longlines and pots fishing on seamounts, and the current threshold levels and move-on rule applied (which are identical to those used in the NAFO and NEAFC areas and based on information for trawlers) are likely to be inappropriate. Furthermore, new scientific results in NAFO suggest that threshold levels and the overall scheme as adopted in that area has limited conservation value, even in trawl fisheries.

In 2009 SC noted that the CCAMLR encounter protocols (which are applicable to longliners) may be more appropriate to the fixed gear fisheries found in the SEAFO CA, but there was insufficient time in 2009 and 2010 to explore this matter further.

SC recommends that an adapted version of the CCAMLR encounter protocols be applied in the SEAFO CA. A suggested revised SEAFO Conservation Measure 17/09 on Bottom Fishing Activities in the SEAFO CA is described below (changes to the existing Measure are indicated in ***bold italics***).

SC could not arrive at a consensus on the issue of VME thresholds (Annex 3 Paragraph 4) and two opinions are presented)

SC has also made some suggested revisions concerning the requirement for impact assessments relating to exploratory fisheries in the new bottom fishing areas (i.e. bottom fisheries outside the SEAFO fishing footprint).

Due to the extensive deliberations on move-on rules and VME thresholds SC did not have sufficient time to evaluate other aspects of the CCAMLR exploratory fisheries protocol.

DRAFT Conservation Measure ??/11: on Bottom Fishing Activities in the SEAFO Convention Area

This is an interim measure addressing the 2006 UN General Assembly Resolution on Sustainable Fisheries (A/RES/61/105).

This measure applies in all existing and new bottom fishing areas outside SEAFO closed areas, cf. Conservation Measure 06/06.

Article 1. Use of terms

1. The term 'bottom fishing activities' means fishing activities where the fishing gear is likely to contact the seafloor during the normal course of fishing operations.
2. The term "existing bottom fishing areas" initially means areas where VMS data and/or other available geo-reference data indicating bottom fishing activities have been conducted within a reference period of 1987 to 2007. This shall be revised regularly in accordance with Article 2.4.
3. The term "new bottom fishing areas" means all other areas within the Regulatory Area that are not defined as existing bottom fishing areas. Fisheries conducted in new bottom fishing areas are regarded as "exploratory fisheries".

Article 2. Identification of existing bottom fishing areas

4. SEAFO shall proceed to map existing bottom fishing areas within the Convention Area for bottom fishing activities. Mapping of bottom trawling activity shall be given priority.
5. Contracting Parties with vessels involved in bottom fishing activities in the period of 1987-2007 shall, for the purpose of Paragraph 2, submit comprehensive maps of existing fishing areas to the Executive Secretary. Maps shall be based on VMS data and/or other available geo-reference data and expressed in as precise spatial and temporal resolution as possible. Contracting Parties may, in the future, consider the possibility of refining these maps on the basis of haul-by-haul information, if available.
6. The Executive Secretary, assisted by the Scientific Committee, shall compile maps submitted by Contracting Parties pursuant to Paragraph 2. The Executive Secretary shall on that basis, as well as on any other data available to it, produce a comprehensive map of existing fishing areas. The Executive Secretary shall forward this map to the Scientific Committee for review and comment and thereafter to the Commission.
7. The comprehensive map of existing bottom fishing areas referred to in Paragraph 2 shall be revised regularly to incorporate any new relevant information.

Article 3. Bottom fishing activities in new bottom fishing areas

8. All bottom fishing activities in new bottom fishing areas or with bottom gear not previously used in the area concerned shall be considered as exploratory fisheries and shall be conducted in accordance with an Exploratory Bottom Fisheries Protocol to be adopted by the Commission as soon as possible. Until such a protocol is adopted the interim protocol set out in Annex 1 shall apply.

9. Before exploratory bottom fishing can take place, a detailed proposal and ***impact assessment*** shall be submitted by the Contracting Party to the Scientific Committee for scrutiny. The Committee will provide a recommendation to the Commission who will decide if the exploratory fishing may proceed. The exploratory bottom fishing activities shall be subject to the ***impact*** assessment procedure set forth in Article 4, with the understanding that particular care shall be taken in the evaluation of risks of the significant adverse impact on vulnerable marine ecosystems, in line with the precautionary approach.

10. Contracting Parties shall provide promptly a report of the results of such activities to the Secretary for circulation to all Contracting Parties.

11. Contracting Parties shall ensure that vessels flying their flag conducting exploratory fisheries have a scientific observer on board. Observers shall collect data in accordance with a Vulnerable Marine Ecosystem Data Collection Protocol to be adopted by the Commission as soon as possible. Until such a protocol is adopted, the interim protocol set out in Annex 2 shall apply.

Article 4. Assessment of bottom fishing activities

12. On the basis of best available scientific information, the Scientific Committee shall identify vulnerable marine ecosystems in the Convention Area and map sites where these vulnerable marine ecosystem are known to occur or likely to occur and provide such data and information to the Executive Secretary for circulation to all Contracting Parties

13. Proposed bottom fishing activities in the Convention Area shall be subject to assessment by the Scientific Committee, based on the best available scientific information, to determine if such activities, taking account of the history of bottom fishing in the areas proposed, would have significant adverse impacts on vulnerable marine ecosystems.

14. Assessments shall follow the procedures below:

i. Each Contracting Party proposing to participate in bottom fishing shall submit to the Executive Secretary information and an initial ***impact*** assessment of the known and anticipated impacts of its bottom fishing activities on vulnerable marine ecosystems, in advance of the next meeting of the Scientific Committee. These submissions shall also include the mitigation measures proposed by the Contracting Party to prevent such impacts. The Executive Secretary shall promptly forward these submissions to the Scientific Committee and the Commission.

ii. The submission of such information shall be carried out in accordance with guidance developed by the Scientific Committee, or, in the absence of such guidance, to the best of the Contracting Party's ability.

iii. The Scientific Committee shall undertake an ***evaluation of the impact*** assessment, according to procedures and standards it develops, and provide advice to the Commission as to whether the proposed bottom fishing activity would have significant adverse impacts on vulnerable marine ecosystems and, if so, whether mitigation measures would prevent such impacts. The Scientific Committee may use in its ***evaluation*** additional information available to it, including information from other fisheries in the region or similar fisheries elsewhere.

15. The Commission shall, taking account of advice and recommendations provided by the Scientific Committee, concerning bottom fishing activities, including data and information arising from reports pursuant to Article 5 adopt conservation and management measures to prevent significant adverse impacts on vulnerable marine ecosystems, that may include:

i. allowing, prohibiting or restricting bottom fishing activities;

ii. requiring specific mitigation measures for bottom fishing activities;

iii. allowing, prohibiting or restricting bottom fishing with certain gear types, or changes in gear design and/or deployment; and/or

iv. any other relevant requirements or restrictions to prevent significant adverse impacts to vulnerable marine ecosystems.

16. The Commission shall annually ask the Scientific Committee to provide advice to Commission on the timing and requirement for ***an impact*** assessment of a previously assessed bottom fishery.

Article 5. Encounters with vulnerable marine ecosystems

17. Contracting Parties shall require that vessels flying their flag cease bottom fishing activities in any site in the Convention Area where, in the course of fishing operations, evidence of vulnerable marine ecosystems is encountered, and report the encounter, including the location, and the type of ecosystem in question, to the Executive Secretary so that appropriate measures can be adopted in respect of the relevant site. Such sites will then be treated in accordance with Article 4.

18. The encounter protocol and operational procedures given as Annex 3 shall be followed.

Article 6. Review

19. The Commission shall biannually examine the effectiveness of these provisions in protecting vulnerable marine ecosystems from significant adverse impacts.

Article 7. Status of Conservation Measure

Conservation Measure 17/09 is herewith repealed.

Annex 1

Interim Exploratory Bottom Fishing Protocol for New Bottom Fishing Areas until the Commission adopts a new protocol in accordance with Article 3, paragraph 1 of this Recommendation, exploratory bottom fisheries shall not commence until the following ***impact assessment*** information has been provided to the Executive Secretary by the relevant Contracting Party:

1. A harvesting plan which outlines target fisheries resources, dates and areas. Area and effort restrictions shall be considered to ensure fisheries occur on a gradual basis in a limited geographical area.
2. A mitigation plan including measures to prevent significant adverse impact to vulnerable marine ecosystems that may be encountered during the fishery.
3. A catch monitoring plan that includes recording/reporting of all fisheries resources caught. The recording/reporting of catch shall be sufficiently detailed to conduct an assessment of activity, if required.
4. A data collection plan to facilitate the identification of vulnerable marine ecosystems/fisheries resources in the area fished.

The Executive Secretary shall promptly forward this information to all Contracting Parties and the Scientific Committee.

Annex 2

Interim Vulnerable Marine Ecosystem (VME) Data Collection Protocol Observers on fishing vessels in the SEAFO Convention Area who are deployed pursuant to Article 3, paragraph 11 of this Conservation Measure shall:

1. Monitor any set for evidence of VMEs and the presence of vulnerable marine fisheries resources.
2. Record the following information for identification of VMEs: vessel name, gear type, date, position (latitude/longitude), depth, species code, trip-number, set-number, and name of the observer on datasheets.
3. Collect representative biological samples from the entire ***VME*** catch. (Biological samples shall be collected and frozen when requested by the scientific authority in a Contracting Party). ***For some coral species that are under the CITES list this will not be possible and for these species photographs should be taken.***
4. Provide samples to the scientific authority of a Contracting Party at the end of the fishing trip.

ANNEX 3

Interim operational procedures for fishing in existing and new bottom fishing areas Pursuant to Article 5 of the SEAFO Conservation Measure on bottom fishing activities in the SEAFO Convention Area, the Commission has adopted the following interim measure:

19. Definition of encounter

An encounter is defined to be, above threshold levels as set out in Paragraph 4, with indicator species of coral identified as antipatharians, gorgonians, cerianthid anemone fields, lophelia, and sea pen fields or other VME elements. Any encounter with a VME indicator species or merely detecting the presence of an element itself is not sufficient to identify a VME. That identification shall be made on a case-by-case basis through assessment by relevant bodies.

2. Existing bottom fishing areas

2.1 Vessels shall quantify catch of VME indicator organisms, i.e. coral and sponge. Observers deployed shall identify corals, sponges and other organisms to the lowest possible taxonomical level and apply the sampling protocol found in Annex 2 and SEAFO catch sampling forms. Observers shall submit SEAFO trip summary reports to Contracting Parties and the Secretariat.

2.2 If the quantity of VME elements or indicator species caught in a fishing operation (such as trawl tow or set of longline ***or pots***) is beyond the threshold defined in Paragraph 4 below, the following shall apply:

a. The vessel master shall report the incident to the Contracting Party, which without delay shall forward the information to the Executive Secretary. The Executive Secretary shall archive the information and report it to all Contracting Parties. The Contracting Parties shall immediately alert all fishing vessels flying their flag.

b. The vessel master shall cease fishing, haul the gear, and move away at least ***1 nautical milefor fixed gears*** from the mid-point of ***the line 1200m section (longline and pot)(Paragraph 4)from which the VME-indicator units are recovered,and for trawlers*** 2 nautical miles from the endpoint of the tow/set in the direction least likely to result in further encounters. Any further tows or sets shall be parallel to the tow/set when the encounter was made.The master shall use his or her best judgment based on all available sources of information.***Longliners and pot-vessels shall clearly mark***

fishing lines into line segments and collect segment specific data on the number of VME indicator units (Paragraph 4).

c. The Executive Secretary shall make an annual report on single and multiple encounters in discrete areas within existing fishing areas to the Scientific Committee. The Scientific Committee shall evaluate and, on a case-by-case basis the information and provide advice to the Commission on whether a VME exists. The advice shall be based on annually updated assessments of the accumulated information on encounters and the Scientific Committee's advice on the need for action, using FAO guidelines for management of deep-sea fisheries in the high seas as a basis.

3. New fishing areas

3.1 Vessels shall quantify catch of VME indicator organisms, i.e. coral and sponge. Observers deployed shall identify corals, sponges and other organisms to the lowest possible taxonomic level and apply the sampling protocol found in Annex 2 and SEAFO catch sampling forms. Observers shall submit SEAFO trip summary report to Contracting Parties and the Secretariat.

3.2 If the quantity of VME element or indicator species caught in a fishing operation (such as trawl tow or set of longline ***or pots***) is beyond the thresholds defined in paragraph 4 below, the following shall apply:

a. The vessel master shall report the incident without delay to its Contracting party, which shall forward the information to the Executive Secretary. The Executive Secretary shall archive the information and without delay transmit it to all Contracting Parties. The Contracting Parties shall issue an immediate alert to all vessels flying their flag.

b. The Executive Secretary shall at the same time request Contracting Parties to implement an interim closure of 2 miles radius around the reporting position. The reporting position is that provided by the vessel, either the endpoint of the tow/set or another position that the evidence suggests is closest to the exact encounter location.

c. The Scientific Committee at its next meeting shall examine the interim closure. If the Scientific Committee advises that the area consists of a VME, the Executive Secretary shall request Contracting Parties to maintain the closure until such time that the Commission has acted upon the advice from the Scientific Committee. If the Scientific Committee does not conclude that the proposed area is a VME, the Executive Secretary shall inform Contracting Parties which may re-open the area to their vessels.

3.3. The vessel shall cease fishing, haul the gear, and move away at least 2 nautical miles ***for trawlers*** from the endpoint of the tow/set in the direction least likely to result in further encounters***, and for fixed gears from the mid-point of the line 1200m section (longline and pot) from which the VME-indicator units are recovered. Vessels shall clearly mark fishing lines into line segments and collect segment specific data on the number of VME indicator units (see Paragraph 4).*** Any further tows or sets shall be parallel to the tow/set when the encounter was made. The master shall use his or her best judgment based on all available sources of information.

3.4 The Executive Secretary shall make an annual report on archived reports from encounters in new fishing areas to the Scientific Committee. This report shall also include reports from the exploratory fishing activities that were conducted in the last year. The Scientific Committee shall evaluate the information and provide advice to the Commission on the appropriateness of temporary closures and other measures. The advice shall be based on annually updated assessments of the accumulated information on encounters as well as other scientific information. The Scientific Committee advice shall reflect provisions outlined in the FAO guidelines for management of deep-sea fisheries in the high seas.

4. Threshold levels

An encounter with VME indicator species is defined for each of the following fishing gears as follows:

OPINION A:-

Trawl tow – more than 600 kg of live sponges and/or 60 kg of live coral in existing fishing areas and more than 400 kg of live sponges and/or 60 kg of live coral in new fishing areas.

Longline set – at least 10 VME-indicator units (1 unit = 1kg or 1 litre of live coral and/or live sponge) in one 1200m section of line in both existing and new fishing areas;

Pot set – at least 10 VME-indicator units (1 unit = 1kg or 1 litre of live coral and/or live sponge) in one 1200m section of line in both existing and new fishing areas.

OPINION B:-

Trawl tow – more than 10 kg of live sponges and/or 10 kg of live coral in both existing and new fishing areas.

Longline set – at least 10 VME-indicator units (1 unit = 1kg or 1 litre of live coral and/or live sponge) in one 1200m section of line in both existing and new fishing areas;

Pot set – at least 10 VME-indicator units (1 unit = 1kg or 1 litre of live coral and/or live sponge) in one 1200m section of line in both existing and new fishing areas.

The definition of VME indicator units for bottom longlines and pots is as follows:

The quantity of VME-indicator organisms recovered during hauling should be reported for each 1200m section of the longline or potline as:

a) Volume (litre) for VME-indicator organisms which fit into 10-litre container;

b) Weight (kg) for VME-indicator organisms which do not fit 10-litre container (e.g. branching species); and

c) VME-indicator units which is the combined total of volume of VME-indicator organisms which fit into 10-litre and weight of VME-indicator organisms which do not fit into containers of 10-litre (i.e. unit = volume + weight).

22 REVIEW PROGRESS RE DEVELOPMENT OF SEAFO BOTTOM FISHING FOOTPRINT.

SC reviewed the additional footprint data for fixed bottom fishing gears supplied by EU (Portugal) which comprised VMS data for vessels fishing during the period 1987-2007, noting that fishing activity was assumed to be when vessel speed was zero knots and the depth was <1000m. These data were considered suitable for inclusion in updating the SEAFO bottom fishing footprint.

Last year, SC identified that data in the required format were not available from Norway and Japan. Historical catch data for Norway are only reported for FAO area 47 (SE Atlantic) and therefore cannot be used in the footprint. This year the data from Japan were re-analysed to exclude VMS records where vessels speed was >4.9 knots, and these data have now been compiled in the fishing footprint.

Apart from Norway, the only outstanding information likely to impact the fishing footprint is the historical information for ex-Soviet Union countries. Preliminary information from the FAO suggests that any historical data will not be available at the required level of spatial precision.

SC therefore proceeded to develop what it considers to be a final fishing footprint for the SEAFO CA (Fig. 8). As the footprint is based on data (1987-2007) which also includes VMS, reported shooting and hauling positions may only be represented by a single coordinate. Therefore the footprint may not fully reflect the actual area fished. SC envisages that the Commission may wish to take this into consideration when adopting the existing fishing areas.

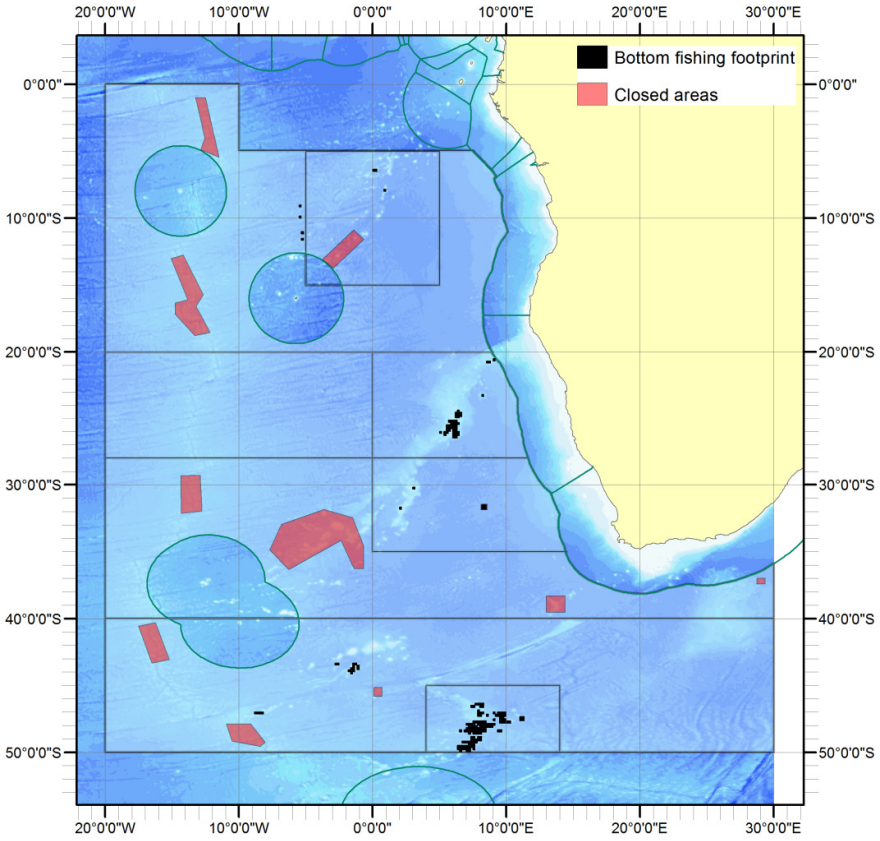

Figure 8. SC's proposal for a final SEAFO bottom fishing footprint using available catch position and VMS data, in accordance with the Commission's footprint criteria (any cell fished in at least 2 years in the period 1987-2007). Each cell is 10 minutes x 10 minutes.

SC noted that since 2007 significant fishing effort has occurred outside the SC's proposed final fishing footprint, defined using the Commission's criteria (Fig. 9). SC requires clarification on the status of the current fishing footprint in relation to requirements for impact assessments.

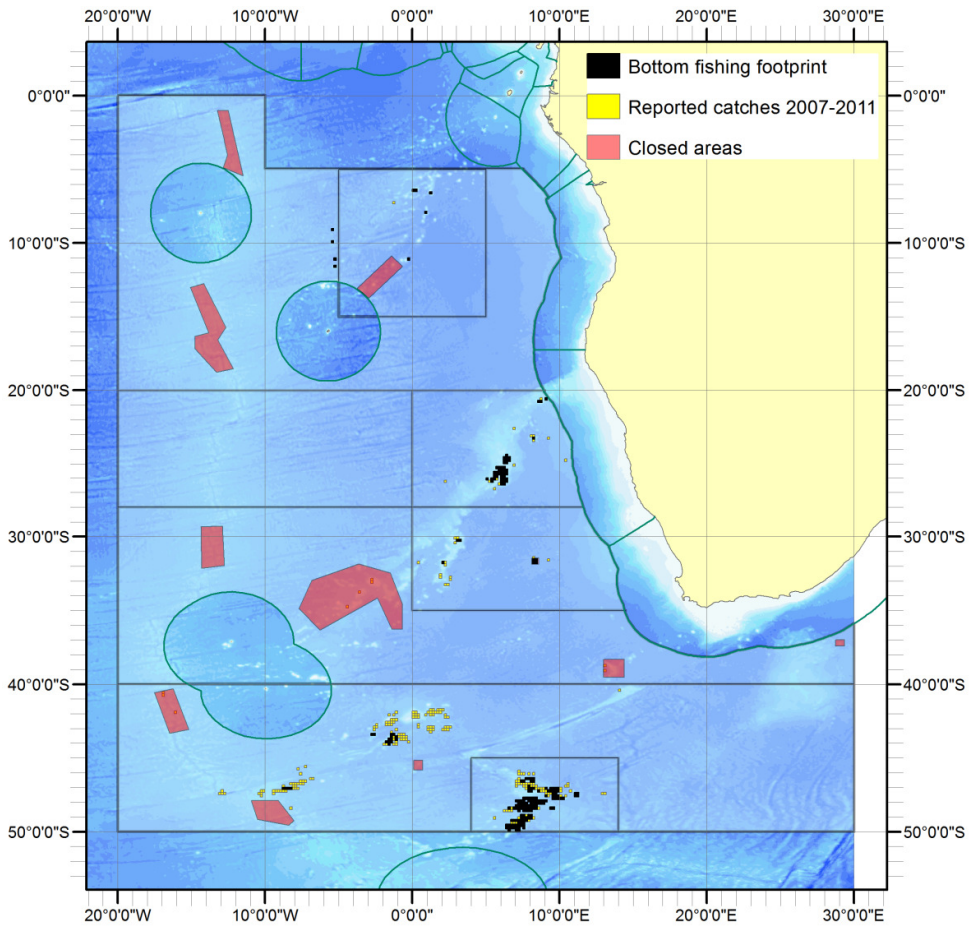

Figure 9. Cells (10 minute x 10 minute) fished since 2007 overlaid with SC's proposal for a final SEAFO bottom fishing footprint.

23 FINALISE REVISION OF THE SCIENTIFIC COMMITTEE RULES AND REGULATIONS.

SC collated available and relevant information on the Rules and Regulationsfor the Scientific Bodies of CCAMLR and the Pacific RFMOs and revised the SEAFO rules and regulations for the Scientific Committee as considered appropriate (Appendix E).

24 CO-OPERATION WITH OTHER ORGANISATIONS/SCIENCE PROGRAMMES:

• BCC data exchange

SC noted that SEAFO has been requested to participate in a data exchange with the Benguela Current Commission (BCC). SC agreed that the Secretariat will make summarized data for all species in the SEAFO CA available. The Secretariat also agreed to request that BCC provide the equivalent data for Coastal State EEZs to SEAFO.

• Invitation for SEAFO to participate in an IUCN Review of RFMO by-catch governance performance assessment

SC welcomed the above invitation by IUCN and is committed to responding to the request for review of the draft IUCN SEAFO Assessment. However, SC had considerable difficulty identifying the references cited since a reference list had not been included. SC agreed to request the Secretariat to notify IUCN with immediate effect to request a fully referenced document in word format which will allow SC to make comprehensive scrutiny of this document. On receipt of this, SC requests the Secretariat to check the factual content and note any discrepancies and then circulate it to SC members for further evaluation. SC also requested the Secretariat to inform IUCN that, at the present time, SC reserves its position regarding the contents of this document.

• Invitation for SEAFO to contribute to and participate in an FAO Project: Demonstration and pilot implementation in 2 ABNJ areas of management and conservation tools for deep-sea fisheries, and conservation and sustainable use of VMEs, & EBSAs (Regional)

SC welcomed the invitation to participate in the above project and requested the Secretariat to approach FAO in order to solicit further information on: project structure, the nature of how SEAFO can contribute (either through SC or through individual SC scientists to be contracted through SEAFO) and how funding will be delivered.

• MARECO

A representative from the SC attended the IUOC-UNESCO workshop entitled Understanding Deep-water Biodiversity in the South Atlantic: Options for Conservation and Sustainable use of Resources in the High Seas.

In November 2010 the research vessel *RVAkademik Ioffe* undertook a research survey partially in the SEAFO area,during which samples of fish and invertebrates were collected, kept, and identified by internal experts. The SEAFO Secretariat agreed to request the cruise report from the MARECO cruise organizers.

• Fishery Resources Monitoring Systems (FIRMS) & Coordinating Working Party on Fishery Statistics (CWP)

The Executive Secretariat gave a summary on progress made. The ES indicated that the FAO Area 47 catch and production database has been updated up to 2009. This is the third release of the database since the revision of the Area 47 statistical division agreed by FAO and SEAFO and endorsed at the 4th SEAFO Annual Meeting. Besides data officially received from countries, recent catch data for Patagonian toothfish and deep-sea red crab, as derived from the 2010 SSC report, have been added. The species profiles are updated and links are available on the SEAFO webpage. The Steering Committee Meeting is scheduled for December 2011.

• FAO Deep-sea Fisheries Project

The Executive Secretary reviewed correspondence with the FAO regarding the Deep-sea Fisheries Project and there are no issues requiring attention by SC at the present time.

• UNEP/CMS, the Convention on the Conservation of Migratory Species of Wild Animals.

SC welcomed the invitation to participate in the development of a conservation plan for migratory sharks. The Secretariat agreed to contact UNEP/CMS to determine if deep-water sharks are included in the scope of the project.

25 ADVICE AND RECOMMENDATIONS TO THE COMMISSION.

As last year, the SC has identified the responsible entities to take action under each recommendation. These should not be interpreted as instructions, but are provided to facilitate responses and needs in a non-prescriptive manner.

RECOMMENDATIONS regarding armourhead: SC could not arrive at a consensus as to the content of management measures (precautionary TACs) for this species. Two opinions were expressed and these are given below:-

OPINION A:-
In 2010 high landings of pelagic armourhead were recorded in area B1 and fishing activities have continued in 2011. This fishery occurs in a localized area of a single seamount and may therefore be vulnerable to rapid depletion. A further concern is that spawning aggregations of similar species of the same genus have been fished in the North Pacific to the extent where the reproductive viability of the remaining SSB has been compromised. Currently there are no management measures regulating catches of armourhead in the SEAFO CA. It is proposed that a precautionary TAC be applied to prevent the potential overexploitation of this stock. It is possible that similar fisheries may quickly develop on other seamount areas in the SEAFO area and any management measures introduced should also take this into account.

Recommendation arising from opinion A: SC recommends that a precautionary TAC of 200t be applied in Division B1 and a TAC of 250t for the remainder of the SEAFO CA. These values were chosen on a precautionary basis and are lower than average catches. The proposed total TAC for armourhead is higher than that for Alfonsino (200 t for the entire SEAFO CA) and this reflects the difference in life history characteristics between the two species (armourhead are faster growing and have a higher relative resilience to exploitation).**ACTION : COMMISSION**

SC recommends that these TACs should not be revised until information is made available regarding the maturity and reproductive biology of armourhead, and attempts made to quantify the initial biomass present in new fisheries. Attempts should be made to build robust time series information of abundance so that in the longer term an adaptive management framework can be adopted. **ACTION : COMMISSION**

OPINION B:-
In the SEAFO CA, in the past 11 years (1998-2009), in most years there were almost no armourhead catches (refer to landing Table 5). In 2010, the mid-water fisheries catching armourhead newly started by **only one vessel**and two vessels are operating in 2011. Under such situation, it is scientifically very premature to establish the precautionary TAC. It is scientifically essential to obtain few more years catch data to evaluate if TAC needs to be established. There have been much **larger fisheries targeting armourhead** in other waters,

such as the Emperor Sea Mount in the Pacific, by **many numbers** of fishing vessels. As they caught a large amount of catch, long term moratoria were established in the past (e.g., 15 years in the Four Emperor Sea Mount). In the SEAFO CA, **only one vessel** just started fishing in 2010 after 11 years of almost no fishing. Thus, the situation is far different from those in other waters. Therefore it is scientifically essential to wait until a few more years catch statistics are available to evaluate if TAC needs to be established.

Recommendation arising from opinion B: SC recommends that no management measures be introduced for armourhead at this time. If in the future management measures are applied these should be catch-based TACs.**ACTION : COMMISSION**

SC recommends that the revised fishing footprint presented under ToR 22 (Figure 8) should be considered final.**ACTION : COMMISSION**

SC recommends that the Commission clarify the status of the SEAFO fishing footprint in relation to requirements for impact assessments.**ACTION : COMMISSION**

SC recommends that an adapted version of the CCAMLR VME encounter protocols be applied in the SEAFO CA. (A suggested revision to Conservation Measure 17/09 is presented under ToR 21, noting that two opinions are given for VME threshold values). **ACTION : COMMISSION**

SC recommends that a specialist database manager/GIS expert be recruited to the SEAFO Secretariat.
ACTION : COMMISSION

SC recommends that the job description of the proposed data manager should include the task of reformatting the SEAFO observer forms so that they expedite transfer of data. This process should include liaison with SEAFO scientists, scientific observers, and the CCAMLR database manager (re. CCAMLR reporting formats). **ACTION : SECRETARIAT**

SC recommends that an ID guide for fish, crustaceans, incidental bycatch species such as seabirds and cetaceans (a turtle guide is already in use) be developed. SC considers that the hiring of consultant to prepare such a guide would be the best way forward, possibly working in conjunction with Birdlife International who already has a seabird guide available. **ACTION : COMMISSION**

SC recommends that CPs provide available maturity data for all species, using the modified length-frequency observer forms.**ACTION : COMMISSION**

SC recommends the Executive Secretary refers to the Compliance Committee the issue that some CPs experience difficulties reporting VMS data.**ACTION : SECRETARIAT**

SC recommends that the SEAFO Secretariat investigates the apparent mismatch between the 2010 longline catch position and VMS data in some areas and report to the Compliance Committee if necessary.
ACTION : SECRETARIAT

SC recommends that SEAFO adopts a standardised format for the reporting of latitude and longitude data for VMS. This format should also be adopted in skipper and observer logbooks.
ACTION : COMPLIANCE COMMITTEE

SC recommends that vessel speed be included in VMS data reported by CPs to the Secretariat.
ACTION : COMPLIANCE COMMITTEE

SC recommends that the Secretariat liaise with NEAFC to enable vessels targeting SEAFO resources can be identified in the VMS dataset supplied by NEAFC.**ACTION : SECRETARIAT**

SC recommendsthat from 2012 onwards the format of the SC report will be modified so that species information is presented in individual status reports for the main species fished in the SEAFO CA.
ACTION : COMMISSION

SC recommends that: [1] a SC members' only section should be created on the SEAFO website; [2] SC a map of the closed areas be included in the front page of the website; and [3] a table be presented summarizing the available SC working documents in the same format as the conservation measures.
ACTION : SECRETARIAT

SC recommends the revised SC rules and regulations (Appendix E) be considered by the Commission and approved if appropriate.**ACTION : COMMISSION**

26 ELECTION OF SC VICE-CHAIR

An election was carried out and Mr. P. Kainge (Namibia) was elected to the position of Vice Chair of SC.

27 FUTURE WORK PROGRAM INCLUDING PROPOSING A PLAN AND PROPOSED TASKS FOR THE DEVELOPMENT OF PRECAUTIONARY HARVEST CONTROL RULES AND ADDRESSING EAF ISSUES.

SC will complete the species profiles and the status reports for the major commercial species fished in the SEAFO CA. Progress on harvest control rules cannot be made at the present time because of a paucity of standardized abundance indices.

28 BUDGET FOR 2012.

SC envisages that the only budgetary requirement would be to hire a consultant to prepare ID keys for observers. SC will attempt to identify costs for presentation during the 2011 Commission meeting.

29 ANY OTHER MATTERS.

There were no other matters raised to be addressed at the present time.

30 ADOPTION OF THE REPORT.

The report was presented and adopted by the meeting.

31 DATE AND PLACE OF THE NEXT MEETING.

SC expressed the view that if the Annual Commission meeting is in Namibia, SC would wish to convene in Windhoek. The Executive Secretary reported that there is a possibility that the Commission meeting in 2012 may be moved to June, noting a final decision will be made by the Commission in 2011. SC is of the view that if the meeting is moved to June representation from Namibia will be substantially reduced (including the Namibian representative) due to other commitments. The EU representative will also not be available. Furthermore SC notes that NAFO Scientific Council meets for ten days in early June and several members of SEAFO SC are involved at that meeting.

In view of the above, SC considers that a SC meeting June is likely to be problematic.

32 CLOSURE OF THE MEETING.

On Friday 7th October 2011 at 1850 hrs, the Chairperson declared the closure of the meeting after all items had been concluded. In his closing remarks, the Chair expressed his satisfaction for the work accomplished and thanked all participants for their valuable contributions.

33 REFERENCES

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APPENDIX A – List of Participants

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APPENDIX B – Agreed template for Stock Status Reports

1. Description of the fishery
   1.1 Description of fishing vessels and fishing gear
   1.2 Spatial and temporal distribution of fishing
   1.3 Reported landings and discards
   1.4 IUU catch

2. Stock distribution and identity

3. Biological information
   3.1 Length frequencies
   3.2 Length-weight relationships
   3.3 Age data and growth parameters
   3.4 Reproductive parameters
   3.5 Natural mortality
   3.6 Feeding and trophic relationships (including species interaction)
   3.7 Life history parameters and information
   3.8 Tagging and migration

4. Stock assessment
   4.1 Available abundance indices and estimates of biomass
   4.2 Data used
   4.3 Methods used
   4.4 Results
   4.5 Discussion
   4.6 Conclusion

5. Ecosystem implications/effects
    5.1By-catch (fish, invertebrates, seabirds, cetaceans, turtles)
  5.2VME bycatch
5.3Bycatch mitigation methods
5.4Lost and abandoned gear

6.Biological reference points and harvest control rules

7. Current conservation measures

8. State of stock and management advice

9. References

APPENDIX C – Draft preliminary Stock Status Report for Patagonian toothfish

STATUS REPORT

DISSOSTICHUS ELEGINOIDES

2011

CONTENTS

1. Description of the fishery

1.1. Description of fishing vessels and fishing gear

Fishing for Patagonian toothfish in the SEAFO CA started around 2002.

The main fishing countries working in the area include vessels from Japan, South Korea, Spain and South Africa. Historically a maximum of four vessels per year fished in the SEAFO CA.

The fleet operating in SEAFO CA also operates at more southern areas in CCAMLR CA., where most of the fishing effort takes place

The Spanish longline system and the Trot line (Fig. 1) are the fishing gears used.

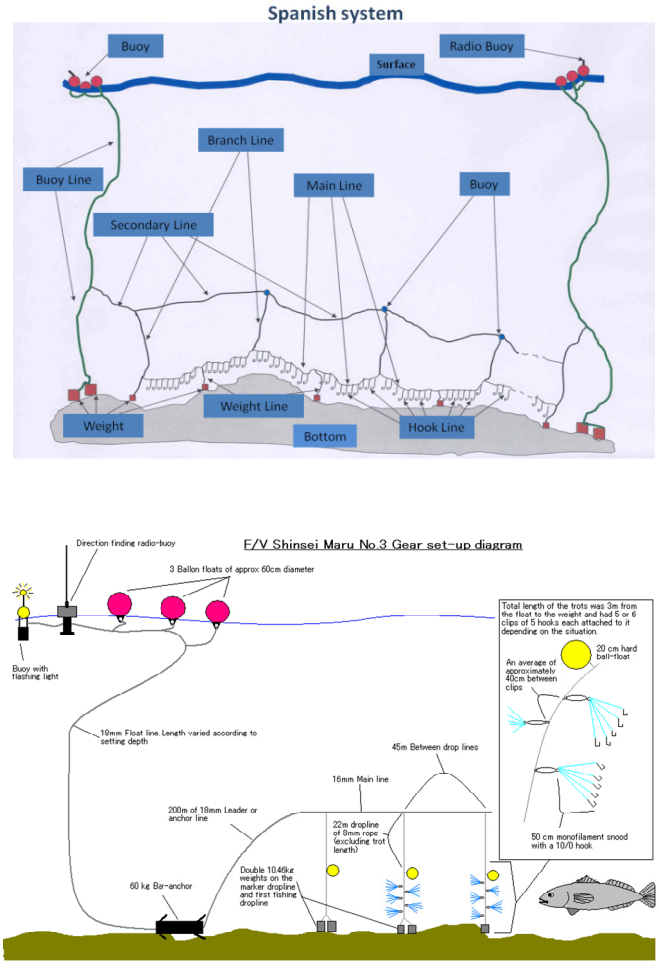

Figure 1. Fishing gears used to fish *D. Eleginoides* : Spanish longline system (top) and the Trot line (bottom)

1.2. Spatial and temporal distribution of fishing

In SEAFO CA, the fishery takes place in Division D (Fig. 2) concentrating on seamounts in Subdivision D1, at Discovery seamount and also at seamounts located in the western part of Division D.

The fishery has seasonal character and takes place after or before the fleet moves or returns from the CCAMLR area.

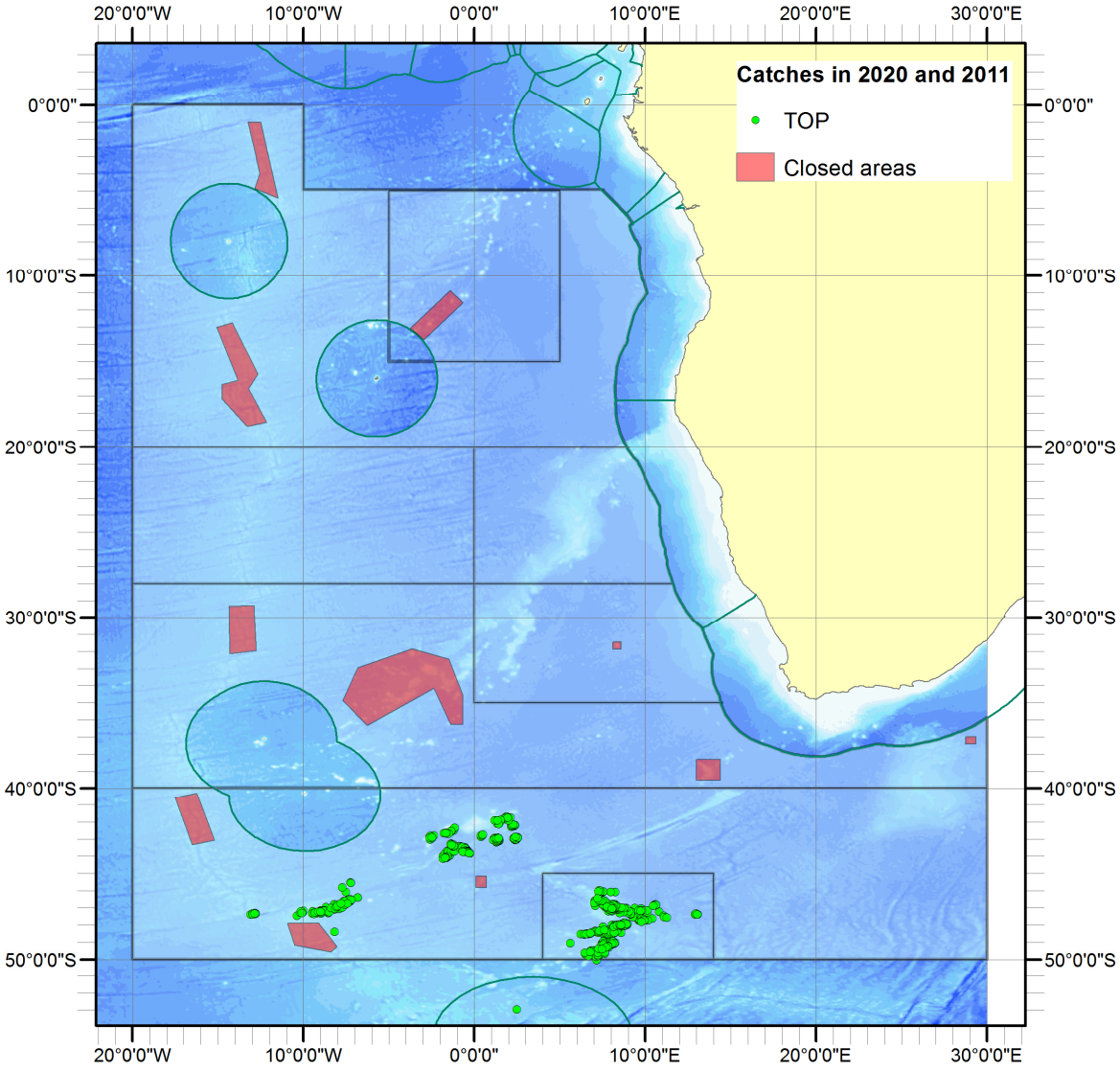

Figure 2.*D. Eleginoides* main fishing areas in SEAFO CA.

1.3. Reported landings and discards

Table 1 present data on Patagonian toothfish landings listed by country, as well as fishing gear and the management Area in which the catch was taken. Annual catches varied between 18 and 210t.

Table 1. Landings (in ton) of Patagonian toothfish by Spain, Japan, Republic of Korea and South Africa (values in bold are from FAO).

Management Area	**D**		**D**		**D**		**D**	
Nation	**EU (Spain)**		**Japan**		**Korea**		**South Africa**	
Fishing method	**Longline**		**Longline**		**Longline**		**Longline**	
Catch details	**Landings***	**Effort****	**Landings***	**Effort****	**Landings***	**Effort****	**Landing***	**Effort****
2002	18	214						
2003	101 (14)	(135)	47		245			
2004	6	313	124					
2005	N/F	N/F	158		10			
2006	11	204	155					
2007	N/F	N/F	166					
2008	N/F	N/F	122		76	1314		
2009	N/F	N/F	86		65	1037		
2010	26	455	54	307				
2011***	N/F	N/F	178	792	N/F	N/F	30	196

Partial effort data refers to partial catch in brackets ( ).
N/F means no fishing. Blank fields mean no data available.
*Whole weight
** 1000 hooks
*** Provisional (August 2011)

In Patagonian toothfish fisheries discards are likely to be relatively low due to the commercial value of the species. The species discards are mainly comprise specimens infected by parasites that destroy completely the muscle (Y. Nishikawa, pers. comm.).

Figure 3 presents discards and catches from Discovery and Meteor seamount by depth stratum. Discards represent less than 10% of the catches and there is no clear trend of the discard rate with depth.

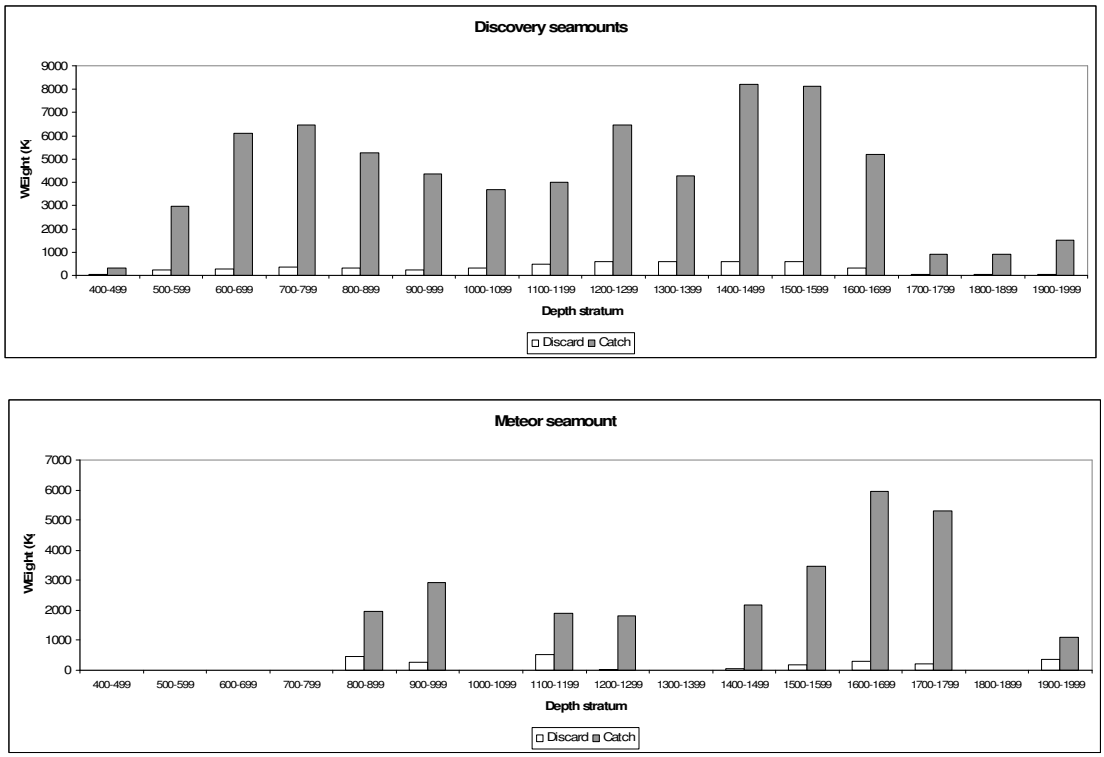

Figure 3. Total weight of Discards and of catches from the Discover and Meteor seamounts for the years 2010 and 2011.

1.3. IUU catch

The extent of IUU catches in the SEAFO CA is currently unknown.

2. Stock distribution and identity

Patagonian toothfish, is a southern circumpolar, euribathic species (70-1600m), associated with shelves of the sub-Antarctic islands usually north of 55º S. Young stages are pelagic (North, 2002). Its presence is remarkable in the Kerguelen-Heard Ridge, islands of the Scotia Arc and the northern part of the Antarctic Peninsula (Hureau, 1985; DeWitt et al., 1990). This species is also known from the southern coast of Chile northward to Peru and the coast of Argentina, especially in the Patagonian area (DeWitt, 1990) and also present in Discovery and Meteor seamounts in the SE Atlantic (Figure 4) and El Cano Ridge in the South Indian (López-Abellán and Gonzalez, 1999, López-Abellán, 2005).

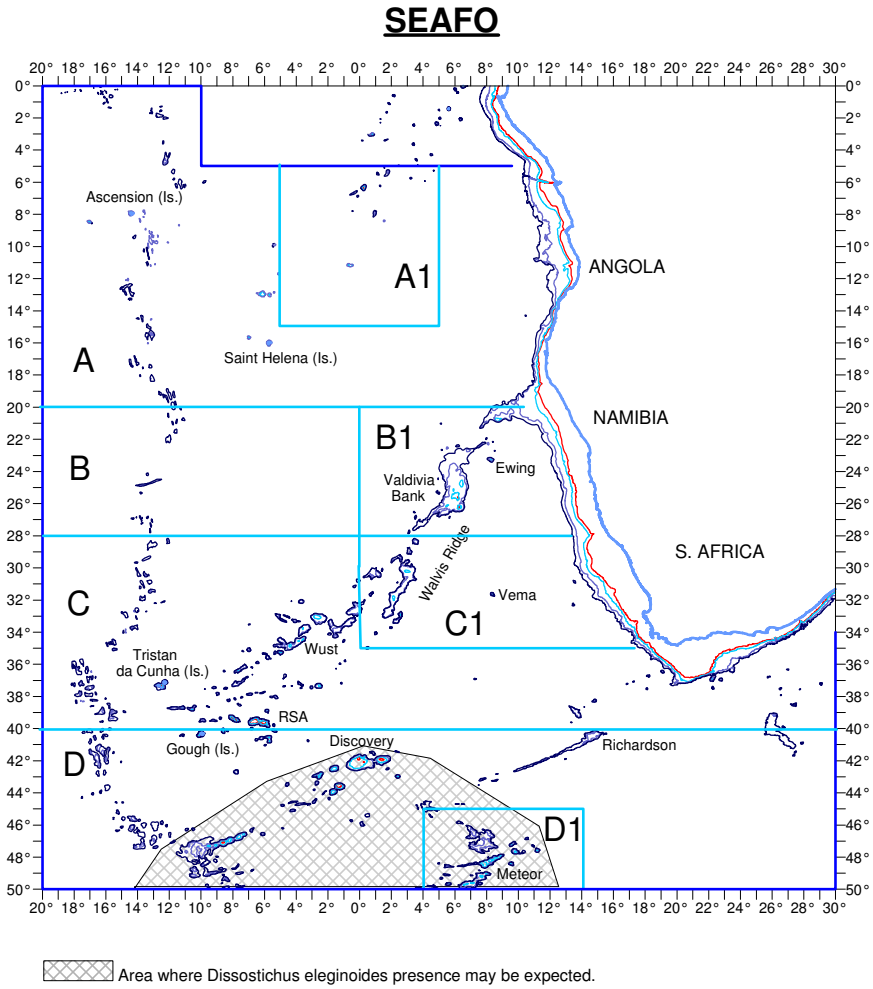

Figure 4. Species geographical distribution in the SEAFO CA.

In SEAFO area the stock structure of the species is unknown. The CCAMLR Scientific Committee in 2009 noted that in most years since 2003 the main species caught in CCAMLR sub-area 48.6 (adjacent to and directly south of SEAFO Division D) is *D. Eleginoides* which is the same species found in the SEAFO CA. The distribution of this species is driven by the sub-Antarctic front which extends into the SEAFO area. Whilst there is no information available from tagging experiments it is reasonable to assume that this species is a transboundary species between SEAFO and CCAMLR region 48.6. So in SEAFO CA for assessment purposes Division D is considered as one management unit.

3. Biological information

3.1. Length frequency distributions

For the period 2002 and 2008 only sparse data on catch and fishing effort are available. However the lack of detailed information on biological data for specimens caught in Division D and also inconsistencies in the weight of fish sampled constrains the estimation of weighted length frequency distributions for that time period.

Using data from the period between 2009 and 2011, length frequency distributions extrapolated to the total catch (Fig. 5). During those years the total length of *D. Eleginoides* ranged from 40 to 215 cm. Along 2009 and 2011 period the proportion of small specimens increased indicating that the fishery tended to harvest smaller fish over time.

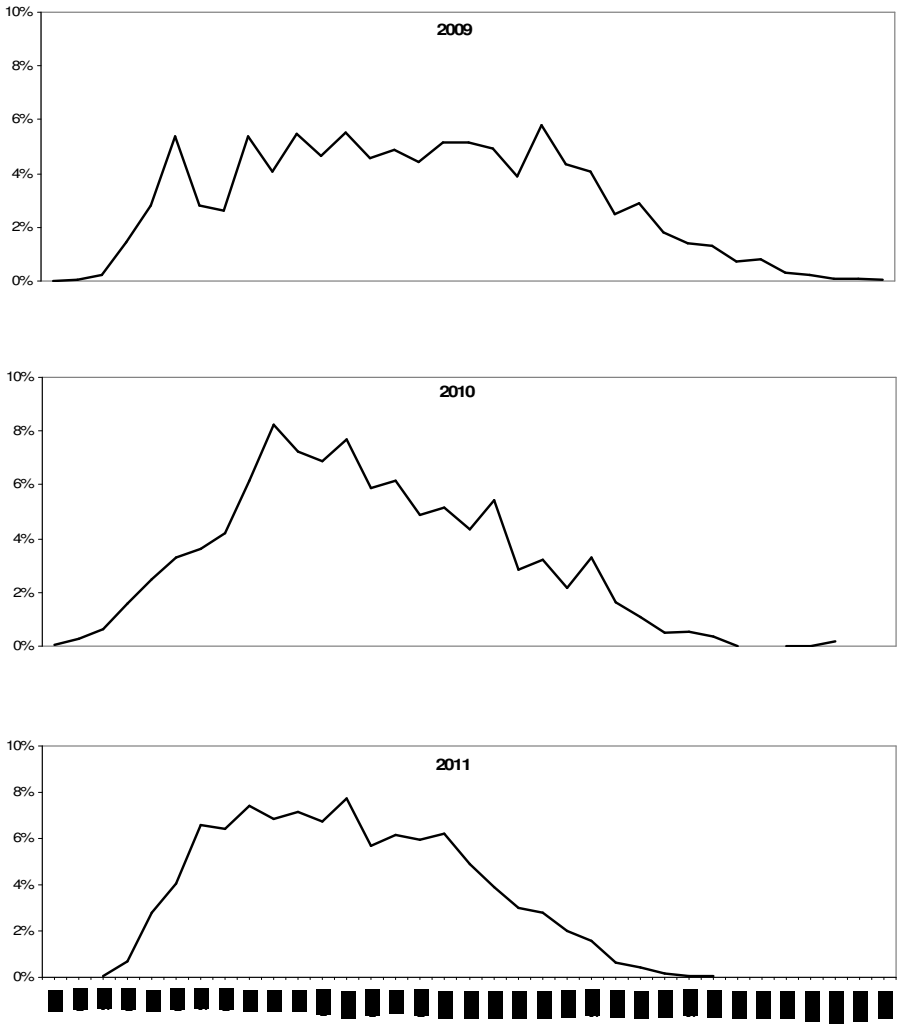

Figure 5. ***D. Eleginoides***. Annual length frequency distribution extrapolated to the total catch in the SEAFO CA for 2009, 2010 and 2011.

Figure 6 shows the mean length of *D. Eleginoides* by year at three different seamount complexes within Division D, as well as, mean depth by year. The length data is derived from biological samples and were not extrapolated to the total catch. Mean lengths of fish caught were larger in the west and east (D1) part than those caught at the central-north area (Discovery seamount). It is likely that depth be the major factor for the mean length differences between areas. At the east and west seamounts the annual mean size decline along years.

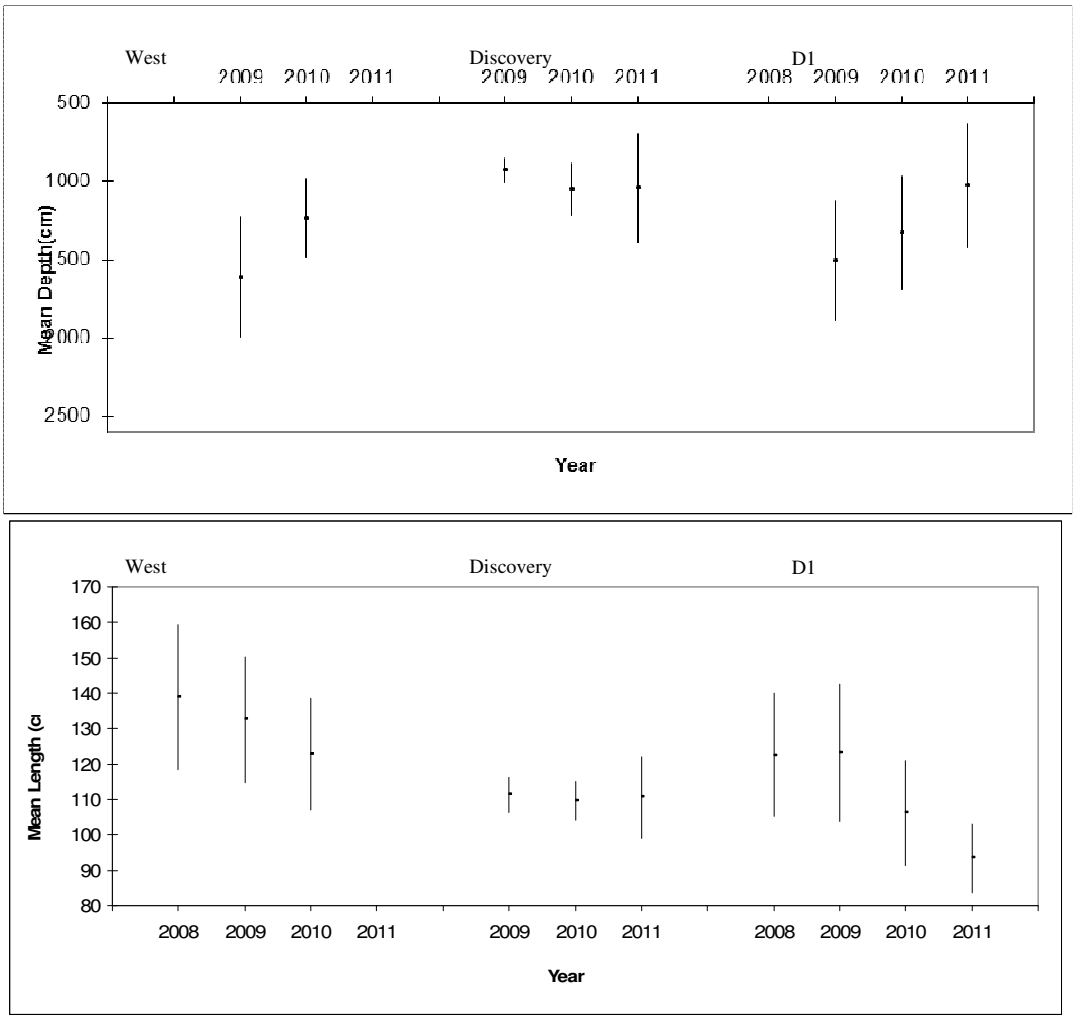

Figure 6.*D. Eleginoides*. Mean depth of fishing and mean length of *Dissostichus eleginoides* at different seamounts complexes of in Division D the SEAFO CA for 2008, 2009, 2010 and 2011.

3.2. Length-weight relationships
To be completed

3.3. Age data and growth parameters
To be completed

3.4. Reproductive parameters
To be completed

3.5. Natural mortality
To be completed

3.6. Feeding and trophic relationships (including species interaction)
To be completed

3.7. Life history parameters and information
To be completed

3.8. Tagging and migration

To be completed

4. Stock assessment

4.1. Available abundance indices and estimates of biomass

Methods used

In 2010 an exploratory assessment of Patagonian toothfish in sub-division D was presented at SC. A non-equilibrium FOX production model was adjusted using ASPIC software (Prager 2004).

Data used

The input data were the standardized abundance indices for the Japanese Trot line and Korean Spanish longline system fleets (Fig. 7) and total international landings.

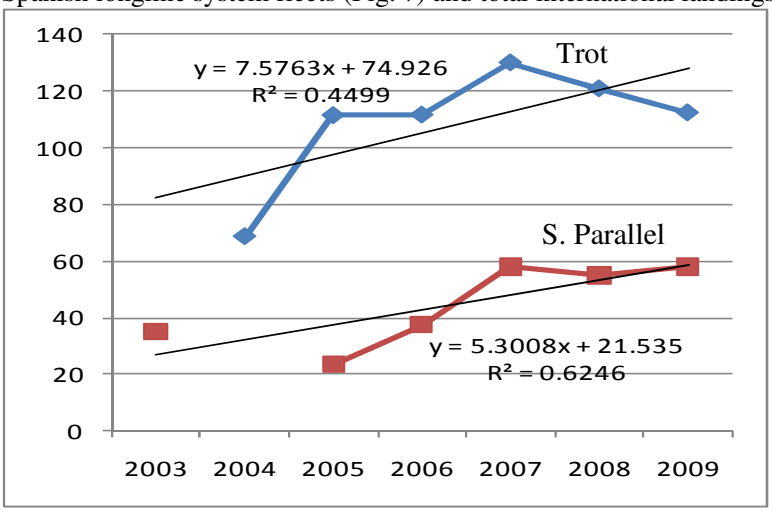

Figure 7.*D. Eleginoides*. Standardized CPUE (kg/1000hooks) of Spanish longline system (in blue) and the Trot line (in red). Differences of the features between two gears are presented by the simple regression lines..

Results

The results from the adjustment of non-equilibrium FOX production model were considered to be unreliable as a basis for scientific advice because of the poor fit of the model, the high level of unexplained variation and a lack of information as to the cause of the observed increase in trend in CPUE. One of the reasons for this bad adjustment may derived from short CPUE time series used (only seven years were considered). As with other examples of fitting production models, a likely problem encountered is the lack of contrast in the abundance indices used.

Discussion

To be completed

Conclusion

To overcome the weak adjustment, different approaches should be tried in the future. Furthermore at least 15 years of good quality of catch and effort data need to be collected in order to conduct robust (reliable) production model analyses using the standardized CPUE. The adjustment of a Bayesian non-equilibrium production model has been suggested. Such approach can partially circumvent the low data contrast problem.

Finally, if in the future, sufficient data on size/age be available age structured stock assessment models, such as VPA (Virtual Population Analyses), ASPM (Age Structured Production Model), SCAA (Statistical Catch-At-Age) etc.., should be tried. Then later more complicated integrated spatial

stock assessments (e.g. CASAL, SS3, MULTIFAN-CL) may be attempted. It is important that at least 2 stock assessments models need to be conducted for cross check purposes

5 Ecosystem implications/effects

5.1. By-catch (fish, invertebrates, seabirds, cetaceans, turtles)

The spatially detailed data on bycatches has been collected from a Spanish longline trip fishing for Patagonian toothfish in 2010 in Division D of the SEAFO CA. A total of 17 taxa of benthic organisms were identified (see Table 13 and Figure 19 in the 2010 SSC report) with a total weight of 94 kg (maximum catch per set was 7 kg). The two most predominant taxa were of the Order Gorgonacea (mostly branching corals) and the phylum Porifera (sponges). However, very few specimens of sponges captured were alive. In addition the Gorgonacea were mostly found in the western area of Division D on a seamount (47°S 8°W) to the south and outside the EEZ of Gough Island.

5.2. VME bycatch

The available information on the distribution of VMEs remains sparse. For both 2010 and 2011 information collected by observers indicate there are no records of the VME encounter threshold levels being exceeded in the few trips that were carried out in 2010.
To be completed

5.3. Bycatch mitigation methods

To be completed

5.4. Lost and abandoned gear

To be completed

6. Biological reference points and harvest control rules

To be completed

7. Current conservation measures

1. Conservation Measure 04/06: On the Conservation of Sharks Caught in Association with Fisheries Managed by SEAFO
2. Conservation Measure 08/06: Establishing a List Of Vessels Presumed To Have Carried Out Illegal, Unreported And Unregulated Fishing Activities in the South-East Atlantic Fisheries Organisation (SEAFO) Convention Area
3. Conservation Measure 11/07: laying down conditions for the resumption of fishing activities in areas subject to closure through conservation measure 06/06
4. Conservation Measure 14-09: To Reduce Sea Turtle Mortality in SEAFO Fishing Operations.
5. Conservation Measure 15-09: On Reducing Incidental By-catch of Seabirds in the SEAFO Convention Area.
6. Conservation Measure 17-09: Bottom Fishing Activities in the SEAFO Convention Area
7. Conservation Measures 18/10 on the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area
8. Conservation Measures 19/10 on Retrieval of Lost Fixed Gear
9. Conservation Measure 20/10: on Total Allowable Catches and related conditions for Patagonian Toothfish, Orange Roughy, Alfonsinos and Deep-Sea Red Crab in the SEAFO Convention Area in 2011 and 2012

8. State of stock and management advice

In SEAFO CA the state of the stock is unknown. The management advice for the species in SEAFO CA is done in accordance with FC practice, taking into account the state of toothfish in areas where this resource is likely to be shared with SEAFO. Information from the CCAMLR Secretariat further

suggests that toothfish in the SEAFO area may be a shared resource with CCAMLR sub-area 58.7 (adjacent to and to the east of SEAFO Division D).
Precautionary TAC´s for toothfish in the SEAFO CA have been recommended taking into account the precautionary approach and specifically the precautionary TAC in the northern component of CCAMLR sub-area 48.6.

Each vessel shall report their catch including nil returns by electronic means to the SEAFO secretariat every 5 days of the fishing trip.

The Commission adopted a TAC of 230 ton for 2011 and 2012.

9. References

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Prager, M. (2004) User's Manual for ASPIC: A Stock-Production Model Incorporating Covariates (ver. 5) and auxiliary programs, Population Dynamics Team, Center for Coastal Fisheries and Habitat Research, National Oceanic and Atmospheric Administration, 101 Pivers Island Road, Beaufort, North Carolina 28516 USA: National Marine Fisheries Service Beaufort Laboratory Document BL-2004-01.

APPENDIX D – Provisional SEAFO Species List

Groups	FAO 3 Alfa Code	Common Name	Family	Species	Author
Crustaceans	SSH	Scarlet shrimp	Aristeidae	*Aristaeopsis edwardsiana*	(J. Y. Johnson, 1868)
	ARI	-	Aristeidae	*Austropenaeus nitidus*	(Barnard, 1947)
	(GER)	(Geryons - Red/Golden deep-sea crabs)	Geryonidae	*Chaceon chuni*	(Macpherson, 1983)
	(GER)	(Geryons - Red/Golden deep-sea crabs)	Geryonidae	*Chaceon erytheiae*	(Macpherson, 1984)
	(GER)	(Geryons - Red/Golden deep-sea crabs)	Geryonidae	*Chaceon gordonae*	(Ingle, 1985)
	(GER)	(Geryons - Red/Golden deep-sea crabs)	Geryonidae	*Chaceon sanctaehelenae*	Manning and Holthuis, 1989
	OLV	Paromola	Homolidae	*Paromola cuvieri*	Wood-Mason and Alcock, 1891
	KCA	King crab	Lithodidae	*Lithodes ferox*	(Filhol, 1885)
	NLE	Rough king crab	Lithodidae	*Neolithodes asperrimus*	(A. Milne-Edwards and Bouvier, 1894)
	KCX	(King crabs)	Lithodidae	*Neolithodes capensis*	Benedict, 1895
	KCM	Subantarctic stone crab	Lithodidae	*Lithodes murrayi*	Henderson, 1888
	KDD	-	Lithodidae	*Paralomis anamerae*	Macpherson, 1988
	DCP	(Spider shrimps)	Nematocarcinidae	*Nematocarcinus longirostris*	(Bate, 1888)
	LBT	Tristan rock lobster	Palinuridae	*Jasus tristani*	Holthuis, 1963
	PJJ	Cape jagged lobster	Palinuridae	*Projasus parkeri*	(Stebbing, 1902)
	PDZ	Grimald's nylon shrimp	Pandalidae	*Heterocarpus grimaldii*	Milne-Edwards & Bouvier, 1900
Cephalopods	OCC	Common octopus	Octopodidae	*Octopus vulgaris*	Cuvier, 1797
	OFJ	Red flying squid	Ommastrephidae	*Ommastrephes bartramii*	(Lesueur, 1821)
	OFE	Orangeback squid	Ommastrephidae	*Sthenoteuthis pteropus*	Steenstrup, 1855
	SQG	Angolan flying squid	Ommastrephidae	*Todarodes angolensis*	Adam, 1962
	SQE	European flying squid	Ommastrephidae	*Todarodes sagittatus*	(Lamarck 1798)
	TFP	Antarctic flying squid	Ommastrephidae	*Todarodes filippovae*	Adam 1975
Cartilaginous fishes	GUQ	Leafscale gulper shark	Centrophoridae	*Centrophorus squamosus*	(Bonnaterre, 1788)
	CYA	Smalleyed rabbitfish	Chimaeriformes	*Hydrolagus affinis*	(de Brito Cappello,1868)
	CFB	Black dogfish	Etmopteridae	*Centroscyllium fabricii*	(Reinhardt,1825)
	ETB	Blurred smooth lantern shark	Etmopteridae	*Etmopterus bigelowi*	Shirai & Tachikawa, 1993
	ETH	Shorttail lanternshark	Etmopteridae	*Etmopterus brachyurus*	Smith & Radcliffe,1912
	ETR	Great lanternshark	Etmopteridae	*Etmopterus princeps*	Collett,1904
	ETP	Smooth lanternshark	Etmopteridae	*Etmopterus pusillus*	(Lowe,1839)
	SBL	Bluntnose sixgill shark	Hexanchidae	*Hexanchus griseus*	(Bonnaterre, 1788)
	BYR	Kerguelen sandpaper skate	Rajidae	*Bathyraja irrasa*	Hureau & Ozouf-Costaz, 1980
	APA	Ghost catshark	Scyliorhinidae	*Apristurus manis*	(Springer, 1979)
	GSK	Greenland shark	Somniosidae	*Somniosus microcephalus*	(Bloch & Schneider, 1801)
	SOR	Little sleeper shark	Somniosidae	*Somniosus rostratus*	(Risso,1827)
	DGS	Spiny Dogfish	Squalidae	*Squalus Acanthias*	Linnaeus, 1758

Bony fishes	ALX	Long snouted lancetfish	Alepisauridae	*Alepisaurus ferox*	Lowe, 1833
	ALH	Smalleye smooth-head	Alepocephalidae	*Alepocephalus productus*	Gill, 1883
	ROT	Softskin smooth-head	Alepocephalidae	*Rouleina attrita*	(Vaillant, 1888)
	BOX	Smalleye scabbardfish	Aphanopodidae	*Aphanopus microphthalmus*	Norman, 1939
	BXD	Alfonsino	Berycidae	*Beryx decadactylus*	Cuvier, 1829
	BYS	Splendid alfonsino	Berycidae	*Beryx splendens*	Lowe, 1834
	BOA	Atlantic pomfret	Bramidae	*Brama brama*	(Bonnaterre, 1788)
	BRA	Lesser bream	Bramidae	*Brama dussumieri*	Cuvier, 1831
		Sickle pomfret	Bramidae	*Taractichthys steindachneri*	(Döderlein, 1883)
	HMY	False scad	Carangidae	*Caranx rhonchus*	Geoffroy Saint-Hilaire, 1817
	YTC	Yellowtail amberjack	Carangidae	*Seriola lalandi*	Valenciennes, 1833
	HMC	Cape horse mackerel	Carangidae	*Trachurus capensis*	Castelnau, 1861
	SNS	Longspine snipefish	Centriscidae	*Macroramphosus scolapax*	(Linnaeus, 1758)
	NPX	Longspine bellowfish	Centriscidae	*Notopogon xenosoma*	Regan, 1914
	BWA	Bluenose warehou	Centrolophidae	*Hyperoglyphe antarctica*	(Carmichael, 1819)
	HDV	Imperial blackfish	Centrolophidae	*Schedophilus ovalis*	(Cuvier, 1833)
	SEY	Violet warehou	Centrolophidae	*Schedophilus velaini*	(Sauvage, 1879)
		Pink frogmouth	Chaunacidae	*Chaunax pictus*	Lowe, 1846
	MOW	St. Paul's fingerfin	Cheilodactylidae	*Nemadactylus monodactylus*	(Carmichael, 1819)
	CFW	Pompano dolphinfish	Coryphaenidae	*Coryphaena equiselis*	Linnaeus, 1758
	ZCT	King dory	Cyttidae	*Cyttus traversi*	(Hutton, 1872)
	EGR	Robust cardinalfish	Epigonidae	*Epigonus robustus*	(Barnard, 1927)
	EPI	Black cardinal fish	Epigonidae	*Epigonus telescopus*	(Risso, 1810)
	EMM	Cape bonnetmouth	Emmelichthyidae	Emmelichthys nitidus nitidus	Richardson, 1845
	PRP	Roudi escolar	Gempylidae	*Promethichthys prometheus*	(Cuvier,1832)
	OIL	Oilfish	Gempylidae	*Ruvettus pretiosus*	Cocco, 1833
	LAI	Southern opah	Lampridae	*Lampris immaculatus*	Gilchrist, 1904
	MVO	Devil anglerfish	Lophiidae	*Lophius vomerinus*	Valenciennes, 1837
	CKP	Globehead grenadier	Macrouridae	*Cetonurus globiceps*	(Vaillant, 1884)
		Surgeon grenadier	Macrouridae	*Coelorinchus acanthiger*	(Barnhardt, 1925)
	CKH	Abyssal grenadier	Macrouridae	*Coryphaenoides armatus*	(Hector, 1875)
	CVY	Striate whiptail	Macrouridae	*Coryphaenoides striaturus*	Barnard, 1925
	MCC	Ridge scaled rattail	Macrouridae	*Macrourus carinatus*	(Günther, 1878)
	MCH	Bigeye grenadier	Macrouridae	*Macrourus holotrachys*	(Günther, 1878)
	HKO	Deep-water Cape hake	Merlucciidae	*Merluccius paradoxus*	Franca,1960
	ANT	Blue antimora	Moridae	Antimora rostrata	(Günther, 1878)
	RIB	Common mora	Moridae	*Mora Moro*	(Risso, 1810)
	NEC	Red codling	Moridae	*Pseudophycis bachus*	(Forster, 1801)
	TOP	Patagonian toothfish	Nototheniidae	*Dissostichus eleginoides*	Smitt, 1898
	LOO	Smalltooth sand tiger shark	Odontaspididae	*Odontaspis ferox*	(Risso, 1810)
	KCP	Kingklip	Ophidiidae	*Genypterus capensis*	(Smith, 1847)
	ORD	(Oreo dories)	Oreosomatidae	*Allocyttus guineensis*	Trunov & Kukuev, 1982
	ALL	Warty dory	Oreosomatidae	*Allocyttus verrucosus*	Gilchrist, 1906
	ONV	Spiky oreo	Oreosomatidae	*Neocyttus rhomboidalis*	Gilchrist,1906

	EDR	Pelagic armourhead	Pentacerotidae	*Pseudopentaceros richardsoni*	(Smith,1844)
	PXV	Stout beardfish	Polymixiidae	*Polymixia nobilis*	Lowe, 1838
	WRF	Wreckfish	Polyprionidae	*Polyprion americanus*	(Bloch & Schneider, 1810)
	MAS	Chub mackerel	Scombridae	*Scomber japonicus*	Houttuyn, 1782
	SCO	Speckled deepwater scorpionfish	Scorpaenidae	*Pontinus leda*	Eschmeyer, 1969
	SCO	St. Helena deepwater scorpionfish	Scorpaenidae	*Pontinus nigropunctatus*	(Günther, 1868)
	BRF	Blackbelly rosefish	Sebastidae	*Helicolenus dactylopterus dactylopterus*	(Delaroche, 1809)
	ROK	(Rosefishes)	Sebastidae	*Helicolenus mouchezi*	(Sauvage, 1875)
		Groupers	Serranidae	*Epinephelus* spp.	
	GXW	Darwin's slimehead	Trachichthydae	*Gephyroberyx darwinii*	(Jonshon, 1866)
	ORY	Orange roughy	Trachichthydae	*Hoplostethus atlanticus*	Collett, 1889
	TSP	Blunthead puffer	Tetraodontidae	*Sphoeroides pachygaster*	(Müller & Troschel, 1848)
	SFS	Silver scabbardfish	Trichiuridae	Lepidotus caudatus	(Euphrasen, 1788)

RULES OF PROCEDURE FOR THE SEAFO SCIENTIFIC COMMITTEE

PART I REPRESENTATION

1. Each Contracting Party (CP) of the Commission shall be represented by one representative (or an alternative representative in the case of non-availability) who may be accompanied by other experts or advisers**.** Such representatives/experts/advisers shall have appropriate qualifications or relevant experience to the work of the Scientific Committee. However, at its discretion, the Scientific Committee may restrict its deliberations to CP scientific representatives only, and such other persons that the Scientific Committee may invite.
2. Each CP of the Commission shall notify the Executive Secretary as far as possible in advance of any meeting of the name of its representative and before or at the beginning of the meeting the names of its additional experts and advisers.
3. Each CP shall nominate a Scientific Coordinator who shall have primary responsibility for liaison with the Executive Secretary between meetings.

PART II TAKING OF DECISIONS

4. The Chairperson of the Scientific Committee shall put to all Members of the Committee questions and proposals requiring decisions.
5. The Committee shall make every effort to make decisions and adopt its reports by consensus (defined as when there are no objections). If every effort to achieve consensus has failed, the report shall indicate the various opinions expressed.
6. In the exercise of its functions, the Committee may, where appropriate, contact any other fisheries management, technical or scientific organization with competence in the subject matter of such consultation and may seek expert advice as required on an ad-hoc basis.
7. The Committee may establish such other subsidiary bodies as it deems necessary for the exercise of its functions.
8. At a meeting of the Scientific Committee, unless it decides otherwise, the Scientific Committee shall not discuss or take a decision on any item that has not been included in the provisional agenda for the meeting in accordance with Part IV of these Rules.
9. When necessary, the taking of decisions and Members' views on any proposal made during the period between meetings may be carried out by post or by other means of textual communication.

   The Executive Secretary shall distribute copies of the proposal to all Members.

   i. Members shall immediately acknowledge receipt of the Executive Secretary's communication and respond to the Chairperson and Executive Secretary within 60 days of the date of acknowledgment of the proposal, indicating their views on the subject/proposal including whether they wish to support it, reject it or abstain on it.

ii. The Executive Secretary shall distribute to each Member copies of all responses as they are received.

iii. The Chairperson shall distribute a summary of the proposed SC response for final approval by Members and once approved submit the response to the Executive Secretary for further action.

PART III CHAIRPERSON, VICE-CHAIRPERSON AND EXECUTIVE SECRETARY

10. The Scientific Committee shall elect from among its Members a Chairperson and Vice-Chairperson, each of whom shall serve for a term of three years and shall be eligible for re-election for one additional term. The Chairperson and Vice-Chairperson shall not be representatives of the same CP.

11. The conduct of elections is a Secretariat competence and elections will occur at the Annual Meeting of the Scientific Committee. The Executive Secretary (ES) will notify Members of an impending election when the draft agenda is circulated. At the start of the meeting the ES will ensure that all Members have a nomination paper and that all attending Members are aware that an election is to be held. The ES will announce when completed nomination forms have to be submitted (usually 48 hrs before the election). It is the responsibility of each Member to ensure that the nomination paper is returned on schedule. The ES will distribute to CP Representatives a list of nominees and ballot papers 24hrs before the election is held (usually the last day of the meeting). Each CP Representative is entitled to one vote which must be submitted on paper to the ES by 1200hrs on the day of the election. If a CP Representative is not available at the time of the election, the election shall proceed in his/her absence and he/she shall have no redress to the result of the election. It is the responsibility of each CP Representative to ensure that the ballot paper is returned on schedule. The results of the election will be announced by the ES.

12. A person representing a CP at the Scientific Committee as its Representative who is elected as Chairperson shall cease to act as a Representative upon assuming office and whilst holding this office. The CP concerned shall appoint another person to replace the one who was hitherto its Representative.

13. The Chairperson and Vice-Chairperson shall take office at the conclusion of the Commission meeting at which they have been elected.The Chairperson shall have the following powers and responsibilities:

    a) convene the regular and extraordinary meetings of the Scientific Committee;

    b) preside at each meeting of the Scientific Committee;

    c) open and close each meeting of the Scientific Committee;

    d) make rulings on points of order raised at meetings of the Scientific Committee, provided that each representative retains the right to request that any such decision be submitted to the Scientific Committee for approval;

    e) put questions and notify the Scientific Committee of the results of deliberations;

    f) approve a provisional Agenda for the meeting after consultation with the Executive Secretary;

g) sign, on behalf of the Scientific Committee, the reports of each meeting for transmission to its Members, representatives and other interested persons as official documents of the proceedings; and

h) exercise other powers and responsibilities as provided in these Rules and make such decisions and give such directions to the Executive Secretary as will ensure that the business of the Scientific Committee is carried out effectively and in accordance with its decisions.

14. Whenever the Chairperson of the Scientific Committee is unable to act, the Vice-Chairperson shall assume the powers and responsibilities of the Chairperson. The Vice-Chairperson shall act as Chairperson until the Chairperson resumes his or her duties. Whilst acting as Chairperson, the Vice-Chairperson will not act as a CP Representative.

15. In the event of the office of Chairperson falling vacant due to resignation or permanent inability to act, the Vice-Chairperson shall act as Chairperson until the Scientific Committee's next meeting on which occasion a new Chairperson shall be elected. Until the election of a new Chairperson, the Vice-Chairperson will not act as a CP Representative. In the event of both the Chair and the Vice-chair not being available, an election of a temporary Chairperson will take place at the start of the Scientific Committee meeting.

16. The Scientific Committee shall be assisted by the Secretariat according to such procedures and on such terms and conditions as the Commission may determine.

PART IV PREPARATION FOR MEETINGS

17. The Committee shall meet as often as is required for the efficient exercise of its functions, provided that the Committee shall, in any event, meet prior to the annual meeting of the Commission and the Chairperson shall report to the annual meeting the results of its deliberations.

18. The Chairperson shall prepare, in consultation with Executive Secretary, a preliminary agenda for each meeting of the Scientific Committee and its subsidiary bodies. He or she shall transmit this preliminary agenda to all Members of the Scientific Committee not less than 65 days prior to the beginning of the meeting.

19. Members of the Scientific Committee proposing supplementary items for the preliminary agenda shall inform the Executive Secretary thereof no later than 45 days before the beginning of the meeting and accompany their proposal with an explanatory memorandum.

20. The provisional agenda shall include:

i. all items which the Scientific Committee has previously decided to include in the provisional agenda;

ii. items the inclusion of which are requested by any Member of the Scientific Committee;

21. The Executive Secretary shall transmit to all Members of the Scientific Committee, not less than one month in advance of the Scientific Committee's meeting, the provisional agenda and explanatory memoranda or reports related thereto.

22. The Executive Secretary shall:

    a. make all necessary arrangements for meetings of the Scientific Committee and its subsidiary bodies;

    b. issue invitations of all such meetings to Members of the Scientific Committee and to such states and organisations as are to be invited in accordance with Rule 27;

    c. take all the necessary steps to carry out the instructions and directions given by the Chairperson.

PART V CONDUCT OF BUSINESS AT MEETINGS

23. The Chairperson shall exercise his or her powers of office in accordance with customary practice. He/she shall ensure the observance of the Rules of Procedure and the maintenance of proper order. The Chairperson, in the exercise of his or her functions, shall remain under the authority of the meeting.

24. No representative may address the meeting without having previously obtained the permission of the Chairperson. The Chairperson shall call upon speakers in the order in which they signify their desire to speak. The Chairperson may call a speaker to order if his or her remarks are not relevant to the subject under discussion or comprise a repetition of points previously made.

25. The Chairperson of the Scientific Committee may attend all meetings of the Commission. He/she shall present the report of the Scientific Committee to the Commission and address the Commission with regard to it. Questions arising from the Commission can be addressed by the Chair and/or in consultation with available Members of the Scientific Committee. If the work requested is beyond the scope of the Members of SC present, the Chairperson can request that this be added to the ToR of the next SC meeting.

26. With the exception of recording devices used by the Secretariat, the use of film, video, sound and any other media devices (including written minutes) to record meeting proceedings shall be prohibited for all participants in Scientific Committee or subsidiary body meetings.

PART VI OBSERVERS

27. The Scientific Committee may:

    a. extend an invitation to any signatory of the Convention to participate, in accordance with Rule 31, as observers in meetings of the Scientific Committee;

    b. invite as appropriate, any non-CP to attend, in accordance with Rule 31, as observers in the meetings of the Scientific Committee;

c. invite, as appropriate, organisations referred to in Article 18(1) and (2) of the Convention to attend, in accordance with Rule 31 below, as observers in the meetings of the Scientific Committee;

d. invite, as appropriate, non-governmental organisations referred to in Article 8(8) of the Convention, to attend in accordance with Rule 31 below, as observers in the meetings of the Scientific Committee unless the majority of the CPs object. Invitations to these organisations shall be issued in accordance with the procedure set forth in Rule 31 below.

28. The Chairperson may, when preparing with the Executive Secretary the preliminary agenda for a meeting of the Scientific Committee, draw to the attention of Members of the Scientific Committee his or her view that the work of the Scientific Committee would be facilitated by the attendance at its next meeting of an observer referred to in Rule 29.

29. The Chairperson may invite observers to address the Scientific Committee unless a Member of the Scientific Committee objects. Observers are not entitled to participate in the taking of decisions.

30. Observers may submit documents to the Secretariat for distribution to Members of the Scientific Committee as information documents. Such documents shall be relevant to matters under consideration in the Scientific Committee. Unless a Member or Members of the Scientific Committee request otherwise such documents shall be available in English or Portuguese. Such documents shall only be considered as Scientific Committee documents if so decided by the Scientific Committee.

31. Observers shall be granted timely access to documents subject to the terms of the confidentiality rules that the Scientific Committee may decide. Invitations to these organisations shall be issued in accordance with the following procedure:

a. Any non-governmental organisation concerned with the stocks found in the Convention area, which desires to participate as an observer in meetings of the Scientific Committee, shall notify an application for observer status to the Executive Secretary at least 60 days in advance of the meeting. This application must include:

b. name, address, telephone, fax number and e-mail address of the organisation and the person(s) proposed to represent the organisation;

c. address of all its national/regional offices;

d. aims and purposes of the organisation and a statement that the organisation generally supports the objectives of the Convention;

e. information on the organisation’s total number of Members, its decision making process and its funding;

f. a brief history of the organisation and a description of its activities;

g. representative papers and other similar resources produced by or for the organisation on the conservation, management, or science of fishery resources to which the Convention applies;

h. a history of SEAFO observer status granted/revoked, where appropriate;

i. information or input that the organisation plans to present at the meeting in question and that it would wish to be circulated by the Executive Secretary for review by CPs prior to the meeting, supplied in sufficient quantity for such distribution.

j. The Executive Secretary shall review applications received within the prescribed time and, at least 50 days before the meeting for which the application was received, shall notify the CPs of the names and qualifications of non-governmental organisations having fulfilled the requirements stipulated this Rule. CPs shall reply in writing within 20 days of the date at which the notification was sent, stating whether they approve or object to the application and giving reasons thereon. The application shall be considered accepted unless a simple majority of the CPs that replied objects. An organisation whose application has been rejected may submit a new complete application prior to any subsequent meeting of the Scientific Committee.

k. Any CP may propose, giving its reasons in writing, that the observer status granted to a non-governmental organisation be revoked. Decisions to revoke observer status shall be taken by a simple majority of the CPs present and voting. The Scientific Committee may agree that this decision becomes effective at its following meeting.

PART VII SUBSIDIARY BODIES

32. The Scientific Committee may determine the composition and terms of reference of any subsidiary body established by it and submit them to the Commission for approval. Insofar as they are applicable, the Rules of Procedure for the Scientific Committee shall apply to any subsidiary body of the Scientific Committee unless the Scientific Committee decides otherwise.

PART VIII LANGUAGES

33. The official and working languages of the Scientific Committee shall be English and Portuguese.

PART IX REPORTS

34. At its annual meeting the Committee shall review the report text as drafted and compiled by a designated rapporteur on an ongoing basis throughout the meeting and sign it off at the end of the meeting as a true and accurate record. The Chairperson and Secretariat may then carry out any minor editorial and formatting revisions as necessary prior to submission to the Commission.