



SOUTH EAST ATLANTIC FISHERIES ORGANISATION

REPORT OF THE 13th ANNUAL MEETING OF THE COMMISSION

28 November to 02 December 2016  
Port Elizabeth, South Africa

The Secretariat

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## **1. Opening of the Meeting**

1.1 The 13th Annual Meeting of the SEAFO Commission was convened at the Radisson Blu Hotel, Port Elizabeth, South Africa, from 28 November - 02 December 2016. The list of participants is provided in Annex 1.

1.2 The meeting was officially opened by the Hon. Minister Zokwana of the Department of Agriculture, Forestry and Fisheries of South Africa and he warmly welcomed the delegates and expressed his wishes for a successful meeting. (Annex 2)

1.3 Hon. Minister Bernard Esau of Ministry of Fisheries and Marine Resources of Namibia delivered opening remarks. (Annex 3)

1.4 The Chairperson, Ms. Marisa Kashorte, made an opening statement (Annex 4).

## **2. Adoption of Agenda and Meeting Arrangements**

2.1 The Commission adopted the agenda with the inclusion of two additional points under Any Other Business.

## **3. Introduction and Admission of Observers**

The observers present were the Benguela Current Commission (BCC), United States of America, Northwest Atlantic Fisheries Organization (NAFO), North Atlantic Marine Mammal Commission (NAMMCO), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), North East Atlantic Fisheries Commission (NEAFC), and International Commission for the Conservation of Atlantic Tunas (ICCAT), and South Indian Ocean Fisheries Agreement (SIOFA).

## **4. Opening Statements**

4.1 All seven of the Contracting Parties were represented.

4.2 All Contracting Parties presented their opening statements (Annex 5) and introduced their respective delegates.

4.3 The United States of America presented an opening statement (Annex 6).

## **5. Status of the Convention in Respect of Membership**

5.1 The Secretariat informed the meeting that no new notification for accession to the Convention was received in 2016 by the United Nations Food and Agriculture Organization (FAO).

5.2 The Secretariat was requested to officially approach the United Kingdom on behalf of their offshore Territories, Iceland and the USA to accede to the Convention. In addition to that, the EU agreed to explore the possibility of raising the matter bilaterally with the United Kingdom and Iceland.

## **6. Report of the 2nd Performance Review Report**

6.1 Prof G. Hurry, chair of the Performance Review Panel, presented the Review Panels' report (Annex 7).

6.2 The Commission considered the 44 recommendations made by the Review Panel and agreed on actions to be taken (Annex 8).

## **7. Report of the Scientific Committee**

7.1. The Chair of the Scientific Committee, Mr P. Kainge, presented the 2016 report (Annex 9).

7.2. A total of 10 Scientific Committee representatives and their advisors, from 5 Contracting Parties attended the Scientific Committee meeting. In addition, an observer from the FAO attended the Scientific Committee meeting.

**ACTION:** The Commission took note that not all Contracting Parties participated in Scientific Committee meeting. The Commission highlighted the importance of attending those meeting and urged Contracting Parties to ensure that scientists participate in the Scientific Committee.

7.3. The Commission approved the proposed exploratory bottom fishing activities in new bottom fishing ground in the SEAFO Convention Area in 2017 submitted by Japan.

7.4. No new notifications of research activities were received.

7.5 The Commission reiterated the continued need for research in the SEAFO CA.

7.6. The Scientific Committee reviewed the Total Allowable Catches (TAC) and related management regulations for Patagonian toothfish, alfonsino, pelagic armourhead, orange roughy and deep-sea red crab for 2017 and 2018 and made the following recommendation to the Commission for consideration and adoption:

7.7 Orange roughy:

Scientific Committee recommends a status quo for Division B1, i.e. a moratorium on directed fishery in Division B1 and allowance for bycatch limit as proportion (10%) of the average of landings from the last five years with positive catches (i.e. 2001-2005), equivalent to 4 tonnes. Due to a lack of new information, the Scientific Committee did not review the current status quo of the 50 tonnes allowance in the remainder of the area.

**ACTION:** The Commission adopted a TAC of 50 tonnes in the remainder of the Convention Area and the status quo for Division B1 for 2017 only. The Commission requested the SC to re-assess the TAC of 50 tonnes for consideration during the Commission meeting in 2017.

**ACTION:** The Commission requested Namibia to consider doing a survey on orange roughy in the SEAFO CA as an extension of the National Orange Roughy survey in the Namibian EEZ.

**ACTION:** The Commission requested the Scientific Committee to conduct a genetic analysis of orange roughy occurring in Namibia to establish if orange roughy is a straddling stock.

7.8 Deep-sea Crab:

Scientific Committee recommends a TAC of 180 tons for Division B1, and 200 tons for the remainder of the SEAFO CA.

**ACTION:** The Commission adopted the recommendation.

7.9 Patagonian toothfish:

The Scientific Committee recommends a TAC for Subarea D of 266 t and a zero TAC for the remainder of the SEAFO CA.

**ACTION:** The Commission adopted the recommendation.

7.10 Pelagic armourhead:

The Scientific Committee recommends a TAC of 135 tonnes for the SEAFO CA. It must be emphasized that the state of the stock is unknown.

**ACTION:** The Commission adopted the recommendation.

7.11 Alfonsino:

The Scientific Committee recommends a TAC of 200 t (status quo) for the SEAFO CA, of which a maximum of 132 tonnes may be taken in Division B1.

**ACTION:** The Commission adopted the recommendation.

## 7.12 Review of the 2017 Work Plan

7.12.1 The Commission took note of the 2017 work plan

**ACTION:** The Commission requested the Scientific Committee to develop a protocol on Exceptional Circumstances on the application of the HCR, such as no sufficient data is available for HCR, for consideration during the Commission meeting in 2017. The EU committed to prepare a paper to inform the discussions.

### **7.13 Budget for 2017**

7.13.1 SEAFO Scientific Committee requested N\$ 50,000 in order to participate in the FAO ABNJ project

**ACTION:** The Commission adopted the request of N\$50,000 for hosting of and assisting participation in an ABNJ pot fisheries workshop and an International orange roughy meeting in Swakopmund, Namibia.

7.14 The Commission took note that date for the next Scientific Committee meeting is 20 - 24 November, and the venue is Swakopmund.

### **7.15 EU proposals on deep-water sharks and shark finning and banning of gillnets**

**ACTIONS:** The Commission could not reach consensus on the proposals.

## **8 Report of the Compliance Committee**

8.1 The Chair of the Compliance Committee Mr D. Azevedo presented the 2016 Compliance Committee Report to the Commission (Annex 10).

8.2 The Commission took note that South Africa has submitted two of the three Port Inspection Reports to the Secretariat subsequent to the circulation of the Annual Compliance Review 2016 document. These reports were also submitted in the CCAMLR format. South Africa indicated that due to difficulties experienced with the revamping of their IT systems during 2016, the Port State Inspection Reports were submitted to the Secretariat via private email albeit late. South Africa however gave the meeting the assurance that these reports would be submitted timeously moving forward and apologized for the delay in submission.

8.3 South Africa committed to send the reports in the correct format on 5th December 2016 to the Secretariat.

8.4 The Commission noted South Africa further emphasized the need for training in the area of Port State Inspection Reports and related compliance matters.

### **Annual Review of the "SYSTEM"**

8.5 The Commission took note of the European Union's proposed amendments to the procedures regarding infringements during Port Inspections and to add SIOFA for cross listing on the SEAFO IUU Vessels List contained in the SEAFO System.

**ACTION:** The Commission adopted amendments proposed to the "System" (Annex 11).

### **Performance Review 2016 Recommendations**

#### **8.6 Recommendation 15: Create and implement follow up mechanisms on Port State infringements.**

The EU has presented a proposal to amend the System to incorporate follow up mechanisms on Port State infringements. The proposal was forwarded to the Commission for further discussions.

**ACTION:** The Commission noted the recommendation and adopted EU's proposal.

#### **8.7 Recommendation 16: The consideration by SEAFO to implement a comprehensive observer programme with compliance purposes**

It was agreed that this recommendation is premature at this stage and consideration might be given in the future.

**ACTION:** The Commission took note of the recommendation.

**8.8 Recommendation 17: Evaluate the opportunity to integrate in the System measures to permit access by observers with compliance purposes from other CP's to carry out functions as agreed by the Commission.**

It was agreed that this recommendation is premature at this stage and consideration might be given in the future.

**ACTION:** The Commission took note of the recommendation.

**8.9 Recommendation 18: Country by Country Compliance Review**

The EU committed to submit a proposal for country by country compliance review process for the next annual meeting.

**ACTION:** The Commission took note of the recommendation and of the intention of the EU to submit a proposal regarding the said for next year.

**8.10 Recommendation 19: Guidance and illustrated description of fishing methods and gears in SEAFO.**

No consensus was reached and the recommendation was not adopted.

**ACTION:** The Commission endorsed the advice from the Compliance Committee and did not adopt Recommendation 19.

**8.11 Recommendation 20: Development of more detailed procedures and requirements for follow up on detected infringements through the application of the System.**

The EU has presented a proposal to amend the System to incorporate follow up mechanisms on Port State infringements. The proposal was forwarded to the Commission for further discussions.

**ACTION:** The Commission took note of the recommendation and adopted EU's proposal.

**8.12 Recommendation 21: Observer Program with compliance purposes.**

It was agreed that this recommendation is premature at this stage and consideration might be given in the future.

**ACTION:** The Commission took note of the recommendation

**8.13 Recommendation 22: Consideration to recognize IUU Vessel lists of all relevant RFMO'S.**

It was agreed to include the SIOFA IUU vessel list to that of SEAFO IUU vessel list.

**ACTION:** The Commission adopted the recommendation

**8.14 Recommendation 29: The Secretariat should maintain linkages and contacts with other RFMO`s in order to build relationships between compliance staff.**

The Compliance Committee agreed to implement this recommendation immediately.

**ACTION:** The Commission adopted the recommendation.

**Consideration of the provisional SEAFO IUU Vessel List cf. SEAFO ``SYSTEM`**

8.15 The Commission adopted the provisional IUU Vessel list with the addition of vessels (Andrey Dolgov, Antony, Northern Warrior) and the deletion of Viking from the list (Annex 12).

**Any other Matters**

8.16 The Commission agreed that the numbering of Conservation Measures (CMs) appeared to be confusing and should be made more reader friendly. After briefly discussing two possible different

numbering systems (i.e., CCAMLR and ICCAT), this matter was deferred to next year for further discussions.

**ACTION:** The Commission took note that the discussion on the document numbering systems of Conservation Measures will be discussed next year. The Secretariat was tasked with preparing a background paper on a number system to be adopted by the Commission next year.

8.17 The Secretariat was tasked with the revision of the compendium of existing enforcement measures which shall be posted on the SEAFO website in PDF format.

**ACTION:** The Commission took note that the revision of the compendium of existing enforcement measures shall be posted on the SEAFO website in PDF format and hence no need to be printed.

8.18 The meeting also agreed that SEAFO should reduce the use of paper by providing more electronic working documents to CP`s.

**ACTION:** The Commission took note of the decision to conduct the Compliance Committee meetings “paperless” in future.

8.19 South Africa identified a need to enhance compliance levels and therefore request that training be provided by SEAFO, costs which are to be borne by SEAFO. It is estimated that training costs would be approximately 30,000 ZAR. South Africa therefore request that these funds be provided for training similar to that provided to Scientific Committee by SEAFO.

**Action:** the Commission endorsed the amount of N\$ 30,000.00 for training on request from South Africa.

#### **Election of Chair and Vice-Chairperson**

8.20 The term of the current Chair and Vice-Chairperson came to an end and in terms of the rotational rule; the EU and Japan will take over the Chair and Vice-Chairperson positions respectively. Nominees from the EU and Japan is to be confirmed as soon as possible.

**Action:** The Commission took note of the change in Chairmanship and that the EU shall provide the Chairperson and Japan the Vice-Chairperson, respectively. Both the EU and Japan will notify the Commission of the names of the Chair and Vice-person within 90 days of the end of the 2016 Annual meeting.

### **9. Report on the Standing Committee on Administration and Finance**

**9.1 The Chair of the Standing Committee on Administration and Finance (SCAF), Mr. K. Bjorklund, presented the 2016 report (Annex 13).**

9.2 The Commission noted that the audit report is unqualified.

9.3 The Commission took note that not all Contracting Parties have paid their respective contributions for 2016.

9.4 The Commission took note that Namibia are currently experiencing budgetary constraints and that they will make a payment soon and that Angola are in the process of paying their contribution.

9.5 The Commission was informed that as a result of fluctuations in the exchange rate (N\$ vs US\$), over and under payments were registered.

#### **Performance Review Recommendations**

**9.6 Recommendation 31: That the Secretariat institutes a process of using numbered Circulars when communicating with members to ensure a more formal process of communication.**

SCAF noted that the Secretariat has already implemented the recommendation.

**ACTION:** The Commission took note of recommendation.

**9.7 Recommendation 32: All correspondence and meeting papers reports be sent and stored electronically**

SCAF endorsed the recommendation.

**ACTION:** The Commission adopted a decision that the future Commission meetings will be conducted “paperless”

**9.8 Recommendation 33: The Commission considers changing the schedule for its annual meetings to begin on Tuesday with Finance and Administration and Compliance meetings held on Monday.**

**ACTION:** The Commission agreed to maintain “Status Quo” pertaining to the Annual Commission meeting schedule.

**9.9 Recommendation 35: The Commission considers establishing an operational reserve fund**

The Secretariat informed the SCAF that a Reserve Fund has been established.

**ACTION:** The Commission noted that SEAFO already has established such a fund

**Review of Staff Regulation**

9.10 The Commission took note that the EU has presented a working document on the review of Staff Regulation regarding recommendations 37 to 44 of the Review Panel which was briefly discussed and that the content of the paper will be further discussed next year during the one day seminar on “the future of SEAFO” which will be held prior to the annual meeting.

**Approval of the proposed 2017 budget**

9.11 The Commission took note that the Secretariat was tasked to compile a working paper on formalizing the position of the casual employee for consideration during next year’s meeting.

9.12 The committee adopted the Budget for 2017 with the inclusion of the 80 thousand Namibian dollars requested by the Scientific Committee and the Compliance Committee (Annex 14).

9.13 The Commission took note of the contributions of Contracting Parties (Annex 15).

**Compile Contract for Executive Secretary**

9.14 The Commission amended and approved the draft contract to be used for the next Executive Secretary.

**Election of Chair and Vice-Chair person**

9.15 The Commission endorsed the extension of chairmanship of Norway and Japan for one year.

**10. Reports from meetings attended by the Executive Secretary**

10.1 The Commission took note that the Executive Secretary has attended several international meetings and promoted SEAFO.

**11. Reports of SEAFO Representatives at 2016 meetings of other International Organisations**

11.1 The Commission took note of the reports by the various SEAFO representatives namely, European Union (NAFO and SIOFA), Norway (NAMMCO and NEAFC), South Africa (ICCAT), and Korea (CCAMLR).

## **12. Nominations of Parties to represent SEAFO at 2017 meetings of other International Organizations**

12.1 The Commission adopted the following nominees to represent SEAFO as observers at the following meetings in 2017:

ICCAT: Korea  
NAFO and SIOFA: European Union  
CCAMLR, NAMMCO, NEAFC: Norway

## **13. Election of Chair and Vice-Chair**

13.1 The Commission agreed that, according to the rotatory system of Chairs, Angola shall provide the chair and EU the vice-chair of the Commission, respectively for the next term (2017 - 2018).

## **14. Any Other Matters**

14.1 The Commission approved the request from CCAMLR to enter into a formal MOU between the two Organisations. The MOU will be signed by SEAFO and returned to CCAMLR for its signature.

14.2 The Commission adopted and authorised the request from SIOFA to utilize SEAFOs Compliance and Data Manager (Mr. Campanis) to develop SIOFAs databases. It was agreed that for the duration of three weeks Mr Campanis' wage will be withheld while he is doing work for SIOFA.

14.3 The Commission could not reach consensus on the working document submitted by the EU regarding the changes to the Rules of Procedures for the Commission and deferred the working document for consideration at the one-day seminar that will precede the Annual meeting in 2017.

14.4 The Commission took note that the recruitment process for the new Executive Secretary will be finalised by the 31<sup>st</sup> December 2016.

## **15. Venue and Date of 2017 Commission meeting**

15.1 The Scientific Committee will meet next year back to back with Annual Commission meeting.

15.2 The date for the 2017 Scientific Committee meeting is 20<sup>th</sup> November to 24<sup>th</sup> November 2017.

15.3 The date for 2017 Annual Commission meeting is 27<sup>th</sup> to 30<sup>th</sup> November 2017. The annual Commission meeting will be preceded by a one-day Commission and Scientific Committee joint seminar ("The future of SEAFO") to be held on 26<sup>th</sup> November 2017. The main topics for the one-day seminar will be envisaging the appropriate framework of SEAFO which may include possible extension of the Convention Area, and the revision of the staff regulations and Rules of Procedure. Other topics including the numbering of the CMs also will be considered.

15.4 The venue for the 2017 Scientific and Annual Commission meetings is Swakopmund, Namibia.

## **16. Closure of the Meeting**

16.1 The Chairperson closed the meeting at 17h00, Friday 2nd December 2016 and she commended the Contracting Parties for their efficient and effective conduct during the meeting. She thanked delegates for their positive inputs and wished everyone a safe journey back home.



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**Annex 2 - OPENING ADDRESS HON MINISTER SENZENI ZOKWANA****SPEAKING NOTES FOR THE HONOURABLE SENZENI ZOKWANA, MINISTER OF AGRICULTURE,  
FORESTRY AND FISHERIES  
SOUTH EAST ATLANTIC FISHERIES ORGANISATION COMMISSION MEETING  
PORT ELIZABETH  
SOUTH AFRICA  
28 NOVEMBER - 02 DECEMBER 2016**

Bernhardt Esau, Minister of Fisheries and Marine Resources of the Republic of Namibia  
Chairperson of SEAFO,  
Heads of Delegation,  
Government officials,  
Observers and NGOs, MINISTER OF AGRICULTURE, FORESTRY AND FISHERIES, SENZENI ZOKWANA  
(HON), SEAFO  
Ladies and Gentlemen,

On behalf of the South African government, I would like to extend a warm proudly South African welcome you all! Namkelekile eMzantsi Afrika!

South Africa is delighted to host, here in Port Elizabeth, the 13th meeting of the Commission of the South East Atlantic Fisheries Organisation, SEAFO. Ladies and gentlemen, allow me to extend a word of thanks and appreciation to the Chair and her team and my department staff for the excellent preparations and arrangements for this meeting.

In 2014, the President of the Republic of South Africa launched a programme aimed at unlocking the oceans economy, Operation Phakisa. Operation Phakisa was borne as a means to offset investment opportunities in the marine and maritime space to fully capitalize on the opportunities brought by the ocean.

South Africa is responsible for managing an oceans space that is greater than the land territory. With such a large ocean jurisdiction, effective governance presents an opportunity for partnerships and innovation, while also presenting a whole range of complexities.

As part of the Operation Phakisa plan, government has invested in marine and inland aquaculture, and especially in capital and labour intensive programmes. We have recorded some impressive results in this arena.

Distinguished Delegates, South African citizens have bestowed on us their trust to eliminate poverty and realize the dreams of leaders like Nelson Rolihlala Mandela who sacrificed their lives for a free and equal citizenry. As a government we are working hard to deliver on our mandate, guided by these principles.

The Republic of South Africa's commitment to the Regional Fisheries Management Organisations is unquestionable. We are one of the founding members of the International Commission for the Conservation of Atlantic Tunas and the Commission for the Conservation of Antarctic Marine Living Resources.

Some of you may be aware that in February this year, the Republic of South Africa ratified the FAO's Port State Measures and acceded to both the Commission for the Conservation of Southern Bluefin Tuna and the Indian Ocean Tuna Commission!

Regionally, the Republic of South Africa has been very active in the Benguella Current Commission, which is a multi-sectoral intergovernmental initiative of Angola, Namibia and South Africa. In addition, the Republic of South Africa is an active member of the Southwest Indian Ocean Fisheries Commission.

Distinguished Delegates, the Republic of South Africa has been a long standing member of SEAFO. It is very important that we are cognisant of the management of marine living resources in international waters. SEAFO plays a critical role in the conservation and sustainable management of living marine resources in the South East Atlantic Ocean, in particular the deep water species and the associated vulnerable marine habitats.

I am mindful of the fact that even though the Republic of South Africa has been a long standing member of SEAFO, we have not been operating in the Convention for the past three or four seasons.

We are currently allocating new fishing rights in the Patagonian Toothfish sector. We have intentions of growing this sector and it is anticipated that once new fishing rights have been allocated, new operators will take this opportunity and once again fish in the SEAFO Convention area. Having vessels operating in the SEAFO Convention area also acts as a deterrent for Illegal, Unreported and Unregulated fishing and enhances our knowledge of the largely unexplored deep water ocean fauna.

Among the challenges we experience in our waters include issues ranging from illegal fishing practices, fish crimes relating to the transportation of persons, marine life and contraband all add to a host of challenges. Added to that, we have not been spared the dilemma of a sluggish economy, coupled by changing climatic trends, all of which put excessive pressure on government to continuously find innovative ways to manage.

Adequately addressing these would be impossible without partners like yourselves. Ladies and Gentlemen, it is important to bring the following to your attention that the Republic South Africa's Marine Living Resources are managed under a very strong piece of legislation called Marine Living Resources Act which is very clear in its objectives to:

1. achieve optimum utilisation and ecologically sustainable development of marine living resources;
2. conserve marine living resources for both present and future generations;
3. apply precautionary approaches in respect of the management and development of marine living resources; and to;
4. protect the ecosystem as a whole, including species which are not targeted for exploitation;

The SEAFO convention is exemplary in promoting responsible, sustainable ocean use and I look forward to a robust engagement during the next few days as we will continue to work with all other members and cooperating non-members towards sustainable, responsible fisheries for the benefit of all.

In conclusion, I hope you will find time to enjoy some of Port Elizabeth's beauty. Take a walk at the beach, enjoy the warmth of the people - by the way, PE is also known as the Friendly city - and even make an attempt to see the wildlife.

I thank you.

**Annex 3 OPENING ADDRESS HON MINISTER BERNARD ESAU**

Honourable SENZENI ZOKWANA, Minister of Agriculture, Forestry and Fisheries  
Chairperson of SEAFO,  
Heads of Delegation,  
Government officials,  
Observers and NGOs, MINISTER OF AGRICULTURE, FORESTRY AND FISHERIES, SENZENI ZOKWANA  
(HON), SEAFO  
Ladies and Gentlemen,

I thank you for the invitation to attend the 13<sup>th</sup> Annual SEAFO Commission meeting. It is a honour for me to be and the deliberation of SEAFO is very important. The marine resources of SEAFO are very important for the developing States. SEAFO should manage the resources on a sustainable manner. Furthermore, Member States and in particular developing Contracting Parties should make sure that they benefit from the usage of the resources. Monitoring, Control and Surveillance is very important the SEAFO CA to protect the resources and to deter IUU fishing.

I wish you all a productive meeting

Thank you.



#### Annex 4- Chairperson Opening Statement

Hon Minister of Agriculture, Forestry and Fisheries of the Republic of South Africa, Mr Senzeni Zokwana

Hon Minister of Fisheries and Marine Resources of Namibia, Dr Bernhard Esau

Esteemed Heads of Delegations

Esteemed Contracting Parties Delegations

Chair of the Performance Review Panel, Dr Glenn Harry

Esteemed Observers,

Ladies and Gentlemen

It is my great honour and privilege to greet you all here at the 13<sup>th</sup> Annual Meeting of the SEAFO Commission in Port Elizabeth, South Africa. As this is the first SEAFO meeting that is hosted in South Africa, I encourage delegates and members to find some time during this meeting to explore this beautiful city. Esteemed delegates I would like to start off by recognising the effort and contribution in the planning and organisation of this meeting provided by South Africa through the Ministry of Agriculture, Forestry and Fisheries. South Africa we thank you.

Honourable members, several activities were undertaken by the Commission during 2016 and I will highlight a few of them.

The second performance review on SEAFO was conducted under the chairmanship of Dr Glenn Hurry during April this year. The report was circulated to all Contracting parties and the Commission will consider the Report after being provided with a presentation thereof during this meeting.

The Commission participated in the 25<sup>th</sup> session of the Capture Fishery group of the Coordinating Working Party (CWP) on Fishery Statistics organized by the FAO. The meeting considered some aspects of the *CWP Handbook of Fishery Statistical Standards*. The Handbook of fishery statistical standards is intended to cover the concepts, definitions and related matters as applied to fishery statistics by the international agencies of the Coordinating Working Party on Fishery Statistics. Furthermore, the meeting look at procedures to streamlining national statistics reporting.

The 5<sup>th</sup> meeting of The Fisheries and Resources Monitoring System (FIRMS) - technical working group met in Rome. The Firms Steering Committee recognized FIRMS as a mature framework with strong foundations for global reporting on fisheries status and trends and noted that expectations were met from most of the partners.

The first session of the preparatory Committee (PrepCom) on Marine Biodiversity beyond areas of national jurisdiction took place in the UN Headquarters in March. The PrepCom considered the scope of an international legally binding instrument and its relationship with other instruments including guiding approaches and principles, marine genetic resources, including questions on benefit-sharing. Measures such as area-based management tools, including marine protected areas, environmental impact assessments and capacity building and marine technology transfer. Furthermore, SEAFO participated in a side-event organized by the FAO showcasing SEAFO and the FAO ABNJ project.

The Committee on Fisheries (COFI) held its 32<sup>nd</sup> meeting in Rome in July. During the meeting major international fisheries and aquaculture issues were considered. The FAO published the 2016 State of World Fisheries and Aquaculture (SOFIA) publication. However, concern was expressed. COFI welcomed the entry into force of the 2009 FAO Agreement on Port State Measures to Prevent, Deter and Eliminate IUU Fishing (PSMA). It is with pride that I announce that four SEAFO contracting parties have acceded to the PSMA including Angola, EU, Norway and South Africa.

A two-day workshop was conducted during August at the United Nations headquarters' in order to discuss implementation of various resolutions on actions taken by States and regional fisheries management organizations and arrangements, addressing the impacts of bottom fishing on

vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks. Participants took stock of the considerable progress that had been made at the global, regional and national levels since the adoption of resolution 61/105. However, it was noted that implementation remained uneven and that further efforts to strengthen it were needed. Commonalities among the issues faced by regional fisheries management organizations and arrangements in implementing the resolutions identified by participants included; the paucity of scientific information, difficulties in the collection and sharing of data and the challenges of ensuring an effective science-policy interface.

SEAFO also participated in a FAO/ABNJ workshop in Cape Town earlier this year. The objective being to publish two scientific papers emanating from the successful Dr. Fridjof Nansen survey undertaken in the SEAFO Convention Area during February 2015.

The Scientific Committee took place in October and it is my understanding that it was a very successful meeting. Various scientific related topics were discussed inter alia the updating of the State of Stocks reports of the five commercial important species and TAC's will be recommended for all commercial important species for adoption by the Commission during this meeting.

Esteemed delegates as you know this will be the last meeting that SA will Chair for SEAFO. It has been an honour for South Africa to play this role over the past four years. Notably during South Africa's term as chair the following achievements have been made:

The SEAFO System was adopted

The FAO ABNJ Project was launched

TAC's for various species was defined

Several Conservation and management measures was adopted

There has been no outstanding membership fees and,

Clean audits have been received

I humbly thank you for entrusting me with this huge responsibility and look forward to handing over the next Chairmanship term over to my Angolan successor wishing him all the best.

Esteemed members, you have a full five days ahead with a vital task to fulfil and I am confident that you will fully participate in the deliberations and have a fruitful meeting. Lastly, I echo the previous sentiments as expressed by my Minister Senzeni Zokwana that it is an honour for South Africa to host the 13<sup>th</sup> Annual SEAFO Commission meeting in Port Elizabeth, South Africa and I hereby declare this meeting open.

Thank you

## Annex 5 Contracting Parties Opening Statements

### Angola

Chairperson  
Distinguished delegates  
Ladies and Gentlemen

The Angolan Delegation is very happy for being here in this beautiful city of Port Elizabeth to attend the 13<sup>th</sup> annual meeting of the Commission, and we would like to express our gratitude to the Government of The Republic of South Africa and the National Fishing Authorities for the warm welcoming extended to all delegations here present and for hosting this meeting.

I would like to remind you that Angola always supports the conservation measures taken by the Organization for the sustainable exploration of fishery resources in the convention area and we would like to request the Contracting Parties to respect these measures, thereby contributing to the good management, increased production while guaranteeing food security for the people. Therefore, we encourage and commend the work of the Scientific Committee. On the other hand, we wish to continue with the efforts aimed at modernizing the technical legislation, in particular the efforts aimed at strengthening the observation and inspection system to combat IUU, to achieve the objectives of the commission.

To conclude, we wish all contracting parties fruitful deliberations so that we may bear positive results at the end of this meeting.

I thank you

### EU

Madame Chair,  
Distinguished Delegates,  
Ladies and Gentlemen,

Allow me to share with you our satisfaction to attend the 13<sup>th</sup> annual meeting of SEAFO. I would like to thank South Africa for hosting us in the beautiful city of Port Elizabeth and for the balmy and sunny weather that they have booked for us.

I would also like to extend our gratitude to the Chairperson, Ms Kashorte, who had walked the extra-mile to ensure that all the necessary arrangements were in place for the 13<sup>th</sup> annual meeting of the Commission meeting to run smoothly. I would also like to thank the Benguela Current Commission (BCC) for supporting our work by facilitating some exceptional administrative arrangements.

Esteem Delegates, there are important issues on the table to discuss this week and that will have an impact in the works of this Commission for the coming years: the discussion on the Performance Review report or the election of the Executive Secretary, just to name a few.

The adoption of the recommendations of the performance review report, will provide an opportunity to further strengthen the organisation address the scientific process and further developing compliance matters as well as strengthening monitoring and control.

In this regard, as a first step the EU has submitted a proposal to adopt revised staff regulations to bring SEAFO in line with other RFMOs and to ensure that it continues to attract local and international qualified staff.

The EU is also proposing to revise the Commission rules of procedure to include deadlines for the submission of proposals in order to ensure their proper analysis and facilitate discussions.

The EU is suggesting some further improvements to the system of inspection, as also advanced by the performance review report, to close the existing loopholes regarding inspections.

In line with the scientific advice, the EU is submitting a proposal to turn the existing Recommendation on the banning of the use gillnets into a binding conservation measure and to make the Recommendation on the banning of direct deep-water shark catches compulsory.

Last but not least, equally important is the EU proposal on shark fins naturally attached.

We have some busy days ahead. I look forward to working constructively with you to ensure that SEAFO continues to be a performing organisation that makes us all proud.

Thanks.

## **Japan**

Madam Chair, Distinguished Delegates, Ladies and Gentlemen,

On behalf of the Japanese delegation, I would like to express my sincere appreciation to the Government of the Republic of South Africa for hosting the 13<sup>th</sup> Annual Meeting of the SEAFO in this beautiful city of Port Elizabeth. We would also like to thank the SEAFO Secretariat staff for the excellent preparation and arrangements of the meeting.

At the beginning of the 13<sup>th</sup> Annual Meeting, Japan would like to emphasize that the SEAFO was established, as stipulated in Article 2 of the Convention, for the objective of ensuring the long-term conservation and sustainable use of the fishery resources in the Convention Area.

The SEAFO must not only impose duty for fishermen but also provide proper opportunities for them. The number of vessels conducting fisheries in the SEAFO Convention Area has been declining year by year. In 2016, only one Japanese longline vessel targeting for Patagonian toothfish operated in the Area. Japan is concerned about the possibility that fishermen, for some reasons, do not see the SEAFO attractive.

The SEAFO must create incentive to fish in the Convention Area. The Scientific Committee has not been able to reach consensus on the specific guideline for re-opening of closed areas. Japan strongly requests the Scientific Committee to include re-opening guidelines of closed areas in the scientific research guideline. If the SEAFO adopts guidelines for re-opening of closed areas, it would provide incentive for fishermen to conduct fishing activities in the SEAFO Convention Area.

Japan fully supports the sustainable use of natural resources taking into account the possible impact from fisheries to ecosystem. The Commission must recall that the objective of this organization is “...to ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area through the effective implementation of this Convention.” This is clearly provided for in Article 2 of the Convention.

Japan is ready to work closely and cooperatively with all participants of the meeting so as to find good solutions, and sincerely hopes that this Annual Meeting will be successfully and fruitfully concluded.

Thank you very much, Madam chair.

## **Korea**

Distinguished delegates of Contracting Parties!

It is a pleasure to attend the 13<sup>th</sup> Annual meeting of the Commission and address an opening statement.

The Korean delegation wishes to extend a sincere gratitude to the South African government for hosting the commission meeting and express appreciation to the secretariat for the preparation of the meeting.

As a member of South East Atlantic Fisheries Organisation, Korea is actively participating in the stock assessment and/or management of the major fisheries resources in the Convention Area,

while also promoting national projects to prevent IUU activities, inter alia, the establishment and operation of the Fisheries Monitoring Center and the establishment of electronic catch reporting system.

It is unfortunate that Korea was unable to participate in this year's scientific committee. The reason for this was the three RFMOs' meeting schedules being overlapped during the meeting period. We would like to give an explanation about the limited number of scientists that the nation can operate and that such circumstance impedes the member from fulfilling full participation. I truly wish this matter could be reflected when arranging the meeting schedule.

Korea notes that no fishing will be conducted in the SEAFO Convention Area by Korean-flagged vessels during the next fishing season, however, we once again emphasize that Korea will continue to actively perform its role as a Member country.

Thank you!

### **Namibia**

Namibia is pleased to be at the 13<sup>th</sup> Annual SEAFO Commission meeting and would like to extend our sincere appreciation to the Government of the Republic of South Africa for hosting us at this beautiful city of Port Elizabeth.

Chair, Namibia has keenly followed the proceedings of the Commission since its inception and recognizes the tremendous achievements made by the organization thus far. We are equally aware of the challenges facing the Commission, such as, IUU and acknowledge that collective engagement is required to address the problem.

Chair, Namibia gladly makes use of this opportunity to inform the meeting that we are in an advanced stage to acceding to the FAO Port State Measures, and that we are presently fully compliant with these measures through our National Plan of Action (NPOA) to prevent and deter IUU in our EEZ.

Namibia furthermore, reports that our Vessel Monitoring system is now fully functional and that more than ninety percent of the fleet can be monitored at our Fisheries Monitoring Center in Walvis Bay.

Chair, we are also proud to report that Namibia has gazetted regulations to mitigate seabird by-catches in the hake bottom trawl and longline fisheries and that as of this year the use of tori lines in these fisheries is enforced. The successful implementation of these regulations, however, requires well trained observers and therefore we urge SEAFO to expedite the observer training on the Identification of seabirds which is long overdue.

Namibia is also concerned with the poor data situation and information inadequacies on the SEAFO resources and the difficulties faced by the Scientific Committee to formulate sound scientific advice on the status of the resources and VME's to the Commission and urge that means of improving data collection, such as dedicated surveys are considered.

Chair, we look forward to fruitful deliberations on the agenda issues during this session of the Commission. I thank you.

### **Norway**

Madame Chairperson, distinguished representatives, observers, ladies and gentlemen.

The Norwegian delegation is very pleased to participate at an annual SEAFO meeting in South Africa, and in particular we are happy to be in Port Elisabeth, this friendly and sunny city located at the end of the picturesque garden route along the Cape coast. I would like to thank the Government of South Africa for its hospitality and for preparing this meeting, including providing us with this excellent venue. Unfortunately, there have been some challenges within the Secretariat leading up

to this meeting, but by the swift actions by you Madame Chairperson, problems seem to have been addressed.

Norway notes the good work undertaken by the Scientific Committee in October, but it is unfortunate that scientists of not all Contracting Parties participated at this year's meeting. Although there were different views and approaches to various issues, the Committee managed to come up with consensus solutions and proposals. Norway looks forward to discuss proposals by the Scientific Committee.

Like other RFMOs, SEAFO has taken a series of measures in response to calls from the UN General Assembly to protect vulnerable marine ecosystems, including area closures and a framework concerning identification of existing and new areas. SEAFO last year improved the scheme further, in particular concerning environmental impact assessment and exploratory bottom fishing, and Norway is pleased to note that the Scientific Committee now has agreed to comprehensive procedures and standards for the committee's consideration of proposals for exploratory fishing.

Noting the present low fishing effort and low commercial interest in the fisheries, SEAFO focus should continue to be directed at ensuring that the regulatory framework is subject to principles as laid down in international instruments so any future developments of the fisheries is conducted in accordance with international agreed obligations and standards. This has also been recognized by the Performance Review Panel, which has carefully examined SEAFOs actions. The Panel has proposed a total of 44 recommendations to improve the performance of the organization, many of them, however, pending increased fishing activities in the convention area. Norway is looking forward to discuss the report of the Panel, and to find ways of responding to its recommendations.

All in all, the Norwegian delegation is, as always, prepared to work hard for the next days and contributing to the success of this year's annual meeting.

## South Africa

Madam Chairperson,  
Distinguished delegates and Observers,  
Ladies and gentleman.

Chairperson, on behalf of the Government of the Republic of South Africa, I would like to extend our sincere gratitude and appreciation for the opportunity to host the 13<sup>th</sup> Annual Meeting of the Commission of SEAFO in this beautiful city of Port Elizabeth in South Africa. I also would like to thank Executive Secretary, as well as all the Secretariat staffs for all the assistance in the preparations and arrangements for this meeting.

It's also fitting that the first meeting of the commission held in South Africa is also the final year of chairpersonship of the commission by South Africa and we would also like to thank the members for that honour and trust given to us in the last four years. We would to wish the new leadership all the best going forward and that it will also usher new beginnings for the commission.

We note the decline in the catch by all members and whether intention or otherwise we hope that it would not only assist recruitment within SEAFO area but also in the three countries adjacent to SEAFO area. South Africa is continuing to make strides in its endeavors to unlock full potential of the ocean economy through Operation Phakisa. Fisheries FRMOs such as SEAFO should be used to unlock the resources that lie within the ocean and the sustainable use of these resources which have a meaningful contribution towards the ability to create jobs in years to come. We have also just completed a third rights allocation process in the democratic order and with that our performance within SEAFO will significantly increase. South Africa intends strengthen its relations with likeminded partners to address the skills gap and increase its capacity as we recognize that fishing is an economic activity.

Chairperson South Africa acknowledges the work undertaken by the Second Performance Review Panel chaired by Dr Glen Harry. We however, once again apologize for being unable to participate as part of this review committee. Unfortunately, this was due to unforeseen circumstances. We

look forward to engaging Dr Harry during this meeting on some of the key findings and recommendations of the 2<sup>nd</sup> Review Panel.

Chairperson, we are continuously faced with the challenge of finding the balance between keeping fish production on the rise against meeting the increasing needs of a growing global population, while at the same time allowing overfished populations to recover and preventing other species from joining the list of the overfished species. SEAFO must continue to improve data collection and support key research initiatives, including those needed to reduce uncertainties in stock assessments. South Africa supports management actions that will help resolve the uncertainty associated with the stock recruitment relationship.

At this annual meeting, we expect all parties to cooperate in adopting management measures that not only follow the scientific advice for SEAFO Species, but give due consideration to the uncertainties in the assessment results and are consistent with the respective rebuilding plans whilst unlocking the economic potential of the seas.

In conclusion Chairperson, we look forward to your leadership. SEAFO is becoming a stronger organization and the actions that can - and must - be taken at this year's meeting will continue this important progress. We look forward to working with you and all other CPCs around this table during this 13<sup>th</sup> Annual Meeting of the Commission to continue the momentum towards a stronger, more effective SEAFO.

On behalf of the Republic of South Africa, I thank you!

## **Annex 6 Observer Opening Statement**

### **United States of America**

I would like to thank the Executive Secretariat and the Chair for the warm welcome I have received to the 13th Annual Commission Meeting of SEAFO. I am very pleased to be here on behalf of the United States.

Thank you.



**Annex 7- 2<sup>nd</sup> Review Panel Report**



**REPORT OF THE SECOND PERFORMANCE REVIEW PANEL**

**October 2016**

## EXECUTIVE SUMMARY

The first performance review of SEAFO was conducted by an independent review panel in 2010. In 2015 SEAFO members agreed to undertake a second independent review in 2016 with the review criteria closely following that of the first performance review. The independent review panel for this second review consists of a fisheries management expert nominated by the Food and Agriculture Organization of the United Nations (FAO), a fisheries scientist nominated by the International Council for the Exploration of the Sea (ICES), and two SEAFO Contracting Parties, European Union and South Africa. The SEAFO Secretariat supported and facilitated the review. The Panel met in Swakopmund, Namibia in April 2016 and concluded its report to the Commission in July 2016.

*Note: In preparing this report the 2<sup>nd</sup> review panel (2<sup>nd</sup>RP) was conscious of the excellent explanatory information in the 1<sup>st</sup> review report and decided, where appropriate it was useful to review and incorporate much of this information as it provides a good background for new delegates to the Commission. As such the 2<sup>nd</sup> review panel would like to acknowledge and thank the 1<sup>st</sup> review panel (1<sup>st</sup>RP) for its excellent work and note that as appropriate the explanatory text has been updated and retained in this report.*

The review criteria agreed by SEAFO is Annex 1 to this report. This report reviews the progress of implementation the recommendations of the 1<sup>st</sup>RP. The report then builds on and does not repeat the work of the 1<sup>st</sup>RP.

The Panel took into consideration in developing recommendations for the Commission, the nature of the fishery in this RFMO including;

- the number of vessels and the catch from the fishery;
- the membership of SEAFO (7 contracting parties) and;
- the relatively young age -of the RFMO (2004).

As with the last review the recommendations reflect that SEAFO is an organisation with limited fishing at this time but with the responsibility for the stewardship of the fish stocks and benthic flora across the whole of the SEAFO convention area.

The panel is encouraged by the work that the members have done to progress the recommendations of the 1<sup>st</sup> review report (1<sup>st</sup>RR) which have strengthened the Commission. The panel is also encouraged by the precautionary approach the members have continued to employ, but noted that this approach was not applied systematically. The panel also noted that a different strategy to encourage exploratory fishing and potentially further develop the resources in the SEAFO waters may need to be considered.

The report follows the structure of the 1<sup>st</sup> RP report so that members can where necessary cross reference the two reports. The Report has five chapters.

- **Chapter 1: Introduction**
- **Chapter 2: SEAFO Background**
- **Chapter 3: Relationship with SEAFO and other international fisheries instruments**
- **Chapter 4: Performance review Analysis and Recommendations**
- **Chapter 5: Compendium of Recommendations.**

The Review panel has made forty four (44) recommendations and these recommendations deal with:

- **Science, Conservation and Management**
- **Compliance and Enforcement**
- **Decision making and dispute settlement,**
- **International cooperation; and**
- **Financial, Administrative and Staffing issues.**

Some of the key findings of the 2<sup>nd</sup> Review Panel was pleased that most of the recommendations from the first review report had been addressed but SEAFO and as appropriate changes made to procedures operations. The Review Panel notes that generally this small Commission is very well run and is well structured to deal with current and potential fishing activities in its waters. The key findings of the 2<sup>nd</sup> Review Panel report include the following:

### **Science, Conservation and management**

Given the present low fishing effort and low commercial interest in the fisheries, the present *raison d'être* for SEAFO may be to ensure that a legal regulatory framework is in place regarding fisheries in the convention area in order to ensure 1) that all fisheries activities in the convention area are subject to principles as laid down in international agreements, 2) that any future developments of the fisheries in the area is done with due consideration of the need to ensure the sustainability of such fisheries and 3) that any fisheries activities do not damage other components of the marine ecosystem which may be sensitive to fisheries impacts. The scientific underpinning of the Commission work by the Science Committee (SC) may consider whether to focus its work on 2) and 3) above. This means that SC could consider to invest effort into evaluating candidate rules for exploratory fishing and evaluations if and when there is new interest to exploit fisheries resources in the area and in continuing its work to monitor fisheries impacts on the ecosystem and to evaluate candidate measures to implement an ecosystem approach to fisheries management within SEAFO.

The panel was pleased to note that SEAFO now prepared a stock status report and is of the view that work should continue to update this report and that SEAFO should consider developing an ecosystem status report to complement the stock status report. This would allow the Commission to identify criteria for maximum ecosystem impacts in relationship to

habitats and bycatch. The 2<sup>nd</sup>RP is however conscious that there is currently limited fishing effort and is aware of the cost of operating this commission and as such any developments should be assessed and prioritised by the Commission. An approach to economising scientific resources could be to make a risk based approach to the status of stocks the ecosystem and maximum impact.

The SC should be tasked with providing scientific advice to the SEAFO annual meeting that includes management advice on options for harvest levels of the commercially fished stocks. If this occurs the Commission will be better placed to discuss and decide appropriate management approaches and harvest levels for these species. The two major changes to the Commission since the last review, the amalgamation of the SCC and the SC and the development of the system of observation and compliance are both viewed as positive moves for SEAFO.

### **Compliance and enforcement**

As noted above the development by SEAFO of the System of Observation, Inspection, Compliance and Enforcement is viewed as a very positive development within SEAFO. The panel was also pleased to see that the document was viewed as a “living document” and that it had been reviewed and improved in 2015. The Panel thought the System could be further strengthened by;

- parties providing copies of inspection reports;
- including information on gears and technologies used in the fishery in the System; and
- developing detailed procedures to follow-up detected infringements

SEAFO should consider the usefulness of compliance observing on vessels in the convention area as this would address any compliance shortcomings SEAFO may have and would mean that a program was in place should fishing activity in the region suddenly increase. If there is an increase in fishing activity and catch SEAFO should also consider the development and implementation of catch documentation for key species.

### **Decision making and dispute settlement**

The Panel are satisfied that the decision and dispute provisions and process in SEAFO are appropriate.

### **International cooperation**

The Panel suggests that SEAFO continues to pressure the UK to join the Commission as it has territories in the Convention Area and has obligations under 116-119 of the UNCLOS. The recent BREXIT vote and the exit of the UK from the EU may encourage UK interest in RFMOs.

The Panel found current cooperation and liaison with other international and regional organisations appropriate and noted that an ongoing relationship with SIOFA may be beneficial.

The Panel encourages ongoing contributions to the Special Requirements Fund.

### **Financial and administrative issues**

The Secretariat is well run under its Executive Secretary Dr Ben Van Zyl and the panel has made some suggestions on actions that the Secretariat may take to better inform the members of the work of the Secretariat. Of real concern to the review panel are the staff regulations, salary scales and the inability of the Commission to deal with the volatility in the Namibian dollar in setting and maintaining salaries at parity. Since 2009 the Namibian dollar has weakened from 8 NAD to the USD to 15 NAD to the USD and as such staff has effectively had a 50% pay reduction. Of equal concern is the lack of a structure to progress pay points and to the capacity to ensure that staff has adequate insurance, medical and superannuation coverage. Organisations have a duty of care to their staff and the current arrangements in SEAFO in respect to staff would not meet the normal requirements of duty of care in most international organisations.

The Panel made series of recommendations with respect to staff regulations and staff pay and conditions and believes these should be addressed immediately by SEAFO.

Given that this is a small Commission the timely payment by Contracting Parties of their contributions is absolutely critical for the smooth operation of the Commission and it should work to build up a reserve fund that is sufficient to ensure the efficient operation of the Commission.

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**APPENDIX 1** Criteria for the Performance Review**APPENDIX 2** WCPFC Decision making criteria

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## ACRONYMS AND ABBREVIATIONS

ALDFG	Abandoned, Lost or otherwise Discarded Fishing Gear
BCC	Benguela Current Commission
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CDS	Catch Documentation Scheme
COFI	Committee on Fisheries of the Food and Agriculture Organization
Convention	Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean
1982 Convention	United Nations Convention on the Law of the Sea
CPUE	Catch per Unit Effort
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of the United Nations
FFA	Pacific Islands Forum Fisheries Agency
FP	Focal Point
ICCAT	International Commission for the Conservation of Atlantic Tuna
ICES	International Council for the Exploration of the Sea
IPOA	International Plan of Action
IUU	Illegal, Unreported and Unregulated Fishing
MCS	Monitoring, Control and Surveillance
MSY	Maximum Sustainable Yield
NAFO	North-west Atlantic Fisheries Organization
NAMMCO	North Atlantic Marine Mammal Commission
NASCO	North Atlantic Salmon Conservation Organization
NEAFC	North-East Atlantic Fisheries Commission
RFMO	Regional Fisheries Management Organisation
SADC	Southern African Development Community
SEAFO	South-east Atlantic Fisheries Organisation
SIOFA	Southern Indian Ocean Fisheries Organisation
SSC	Sub-Committee of the Scientific Committee
TAC	Total Allowable Catch



UNFSA	United Nations Fish Stocks Agreement
VME	Vulnerable Marine Ecosystem
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission

## **1. INTRODUCTION**

### **1.1 International background**

The international background to the establishment of SEAFO was well described by the 1<sup>st</sup>RP and as noted it is updated and repeated for new delegates who may not be aware of the evolution of SEAFO.

The discovery of high value fish stocks above the continental slope of coastal States in the South East Atlantic, notably deep sea crab in Namibia and Angola and orange roughy and alfonso in Namibia and South Africa and pelagic sharks in most of the area, provided the impetus for the establishment of a new regional fisheries management organisation (RFMO) for the conservation and management of those stocks. The process to establish the South East Atlantic Fisheries Organisation (SEAFO) began in 1997, when negotiations were initiated to develop a draft Convention with the objective of ensuring the long-term conservation and sustainable use of marine resources in the high seas of the southeast Atlantic.

The process initially involved the four coastal States in the region: Angola, Namibia, South Africa and the United Kingdom (on behalf of St. Helena and its dependencies, Tristan da Cunha and Ascension Island). In December 1997 it was opened to those with distant water fishing interests in the region, according to the Food and Agriculture Organization (FAO) catch data: the European Union, Japan, Norway, Russia and the United States. Iceland, Poland, Republic of Korea and Ukraine also participated in the negotiations, reflecting the desire of the participants for openness and the inclusion of all States with an interest in the fisheries concerned. The negotiating process lasted four years and spanned seven negotiating sessions.

The text of the Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean (the Convention) was adopted in November 2000, although the signing ceremony was delayed until April, 2001 to allow more time for internal consultations, particularly in Angola, and for the relevant documents to be translated into Portuguese. The Convention entered into force in April, 2003 and the Commission had its inaugural meeting in March 2004. It became fully functional from March 2005 with the establishment of the permanent Secretariat in Walvis Bay, Namibia. The Scientific Committee was established in 2004, the Compliance Committee in 2007 and the Standing

Committee on Administration and Finance in 2009. There are currently seven Contracting Parties to SEAFO: Angola, the European Union, Japan, Namibia, Norway, South Africa and Korea. In addition, States that have signed but not acceded to the Convention are Iceland, and the United Kingdom of Great Britain and Northern Ireland in respect of St. Helena and its dependencies and the United States of America.

The Convention is one of the first RFMOs modelled on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of the Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA). (*Source 1<sup>st</sup> Review Panel report*)

## **1.2 SEAFO Performance Review**

### **1.2.1 The Panel**

In 2015 the Commission agreed that the 2<sup>nd</sup> Review Panel (2<sup>nd</sup>RP) should follow the format of the 1<sup>st</sup>RP and consist of four international experts, with two external experts and two Contracting Parties representing the Parties. The EU and South Africa were nominated to represent SEAFO on the panel. Panel members were:

1. Professor Glenn Hurry (Australia), a fisheries management expert nominated by FAO, who also served as the Chair of the Review Panel;
2. Mr Poul Degnbol (Denmark), a fisheries scientist nominated by the International Council for the Exploration of the Sea (ICES);
3. Mr Orlando Fachada; former Head of the EU Delegation to SEAFO, Directorate-General for Maritime Affairs and Fisheries of the EU; and
4. South Africa (nominated but did not participate).

The Secretariat provided insights and clarification on issues and questions which was extremely useful for the review team. The Secretariat also provided welcome support and facilitated the activities of the review team and assisted in reviewing the report for factual accuracy.

### **1.2.2 Criteria for the Performance Review**

The Criteria agreed upon by the Commission to form the basis for the 2<sup>nd</sup> Performance Review are in Annex 1. They are largely similar to those adopted for the 1<sup>st</sup> review and for reviews of other RFMOs. The Criteria relate to conservation and management, compliance and enforcement, decision-making and dispute settlement, international cooperation and financial and administrative issues.

### **1.2.3 The modus operandi of the Performance Review Panel**

The 2<sup>nd</sup>RP reviewed the recommendations from the 1<sup>st</sup>RP to determine the content and purpose of the recommendations, their process for acceptance and implementation and what if anything was outstanding and still relevant to this review. Many of these recommendations have been acted on by the Commission and Secretariat and as appropriate changes implemented. The review team considered changes and developments internationally and regionally since the first review in 2011 and how these impacted on the Commissions in achieving its mandate and objectives in sustainably managing the fish stocks and related species in the SEAFO area.

The 2<sup>nd</sup>RP has limited its recommendations to those that add value to the work of SEAFO and where recommendations were not necessary this has been noted.

The 2<sup>nd</sup>RP met during the week of the 11<sup>th</sup>-15 April 2016 at the SEAFO offices in Swakopmund Namibia. All subsequent discussions were conducted by electronic media.

### **1.2.4 The structure of the report**

Following the format of the 1<sup>st</sup>RR, this report consists of five sections. The first three sections provide introductory and background information relating to SEAFO and describe the relationship between the SEAFO Convention and other international fisheries instruments and initiatives. Section 4 addresses the Performance Review Criteria by providing:

- An outline of the issues under review;
- panel commentary issues and the first review recommendations; and
- recommendations for consideration by the Commission.

A compendium of the Panel's recommendations is then included for ease of reference in Section 5.

## **2. SEAFO BACKGROUND**

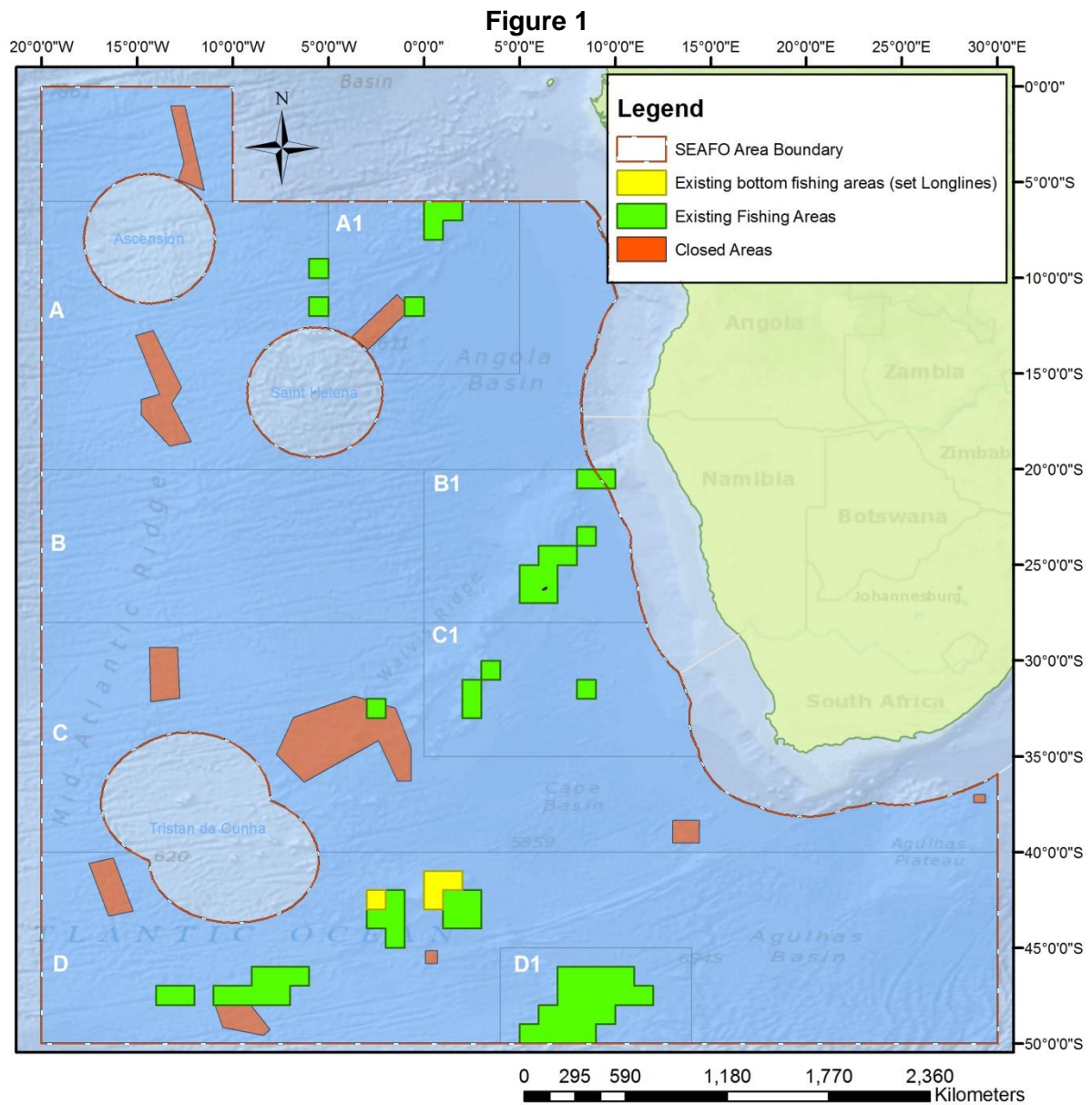
### **2.1 Introduction to SEAFO**

#### **2.1.1 Area of Competence and fisheries**

This section is repeated from the first review for ease of reference by any new delegates to the Commission. (*Source Based on text from the 1<sup>st</sup> Review report and updated*)

The SEAFO Area of Competence (Convention Area) lies in the Southeast Atlantic Ocean beyond national exclusive economic zones (EEZs) of the coastal states of Angola, Namibia, South Africa and United Kingdom (in respect of St. Helena and its dependencies of Accession Islands and Tristan da Cunha). Specifically, it is demarcated by the line beginning at the outer limit of the Angolan EEZ at a point 6° South, then west to the meridian 10° West, then north to the equator, then west to the meridian 20° West, then south to a parallel 50° South, then east to the meridian 30° East, then north to the east coast of South Africa (Figure 1). This area generally corresponds with FAO Statistical Area 47 in the South East Atlantic.

Oceanographically, the northern boundary of the SEAFO Convention Area is bounded by the South Atlantic Equatorial Current that flows westward along the equatorial area. On the western boundary, the area is characterised by an open end of the South Atlantic gyre. The eastern boundary consists of the Benguela and Angolan Currents along the African continent. The Benguela Current flows in a north to north-westerly direction (~15-35°S) and is a major east boundary upwelling system that is very productive in inshore areas and characterised by cool surface temperatures. The warm Angolan Current flows in a southerly direction along the Angolan coast and meets the Benguela Current roughly around 17-15°S commonly referred to as the Angola/Benguela front. The frontal area is characterised by offshore flow into the SEAFO area that transport primary production. The warm Agulhas Current flows south of the African continent in a westerly direction where it meets up with the Benguela Current.



**SEAFO Convention Area**

Warm eddies are formed in this area and transported north-westerly into the SEAFO area. The southern boundary of the Convention Area is dominated by the Southern Ocean Current and is also influenced by the Antarctic Convergence Zone

The prominent topographic features inside the Convention Area include the Walvis Ridge, which extends from around 18°S off the Namibian coast into a south-westerly direction towards the mid-Atlantic ridge; the Agulhas Ridge, which extends from around 35°S south of Cape Town in a south-westerly direction and the mid-Atlantic Ridge, at around 15°W that runs through the entire SEAFO region from north to south. There are also numerous

seamounts, rises, banks and plateaus in the Convention Area; notably among these are Mount Vema and Meteor Rise.

Article 6(12) of the Convention requires the Commission to take account of measures established by other organisations which affect living marine resources in the Convention Area, and seek to ensure consistency with such measures. Therefore, the Commission does not address species that are managed by the International Commission for the Conservation of Atlantic Tuna (ICCAT), the Indian Ocean Tuna Commission (IOTC), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the South West Indian Ocean Fisheries Arrangement (SWIOFA) or the International Whaling Commission. The extent of fisheries resources in the Convention Area is not well known because of the limitations of reliable data and this has not improved in the time between the 2 reviews.

Available data indicate that the following species are or have been caught in varying degrees of tonnage in SEAFO waters, mainly by distant water fishing nations and to lesser extent by Namibia and South African companies over the last 20 years: alfonsino (targeted by bottom trawls no catch since 2013), orange roughy (targeted by bottom trawls), tuna and tuna like species (targeted by bottom and pelagic trawls and also bycatch in longlines), deep sea red crab (harvested by pots), deep water shrimps (bycatch in bottom trawls), swordfish, wreckfish, Patagonian toothfish, Argentines, boarfish, grunts (African striped & bigeye), octopus and lobster.

In 2015, the Commission adopted total allowable catches (TACs) for 2016:

Patagonian Toothfish: TAC to be 264 tons for Sub-area D, and zero tons for the remainder of the SEAFO Convention Area (CA)

Deep Sea Crab: TAC to be 190 tons in Division B1, and 200 tons for the remainder of the SEAFO CA

Orange Roughy: 4 ton bycatch in division B1 and a TAC of 50 tons for the rest of the SEAFO CA.

Alfonsino: 200 tons of which a max of 132 tons can be taken in division B1

Armourhead/Boarfish: 143 tons for the SEAFO CA

:

In 2015 there were only small targeted catches of Patagonian Toothfish and Deep Sea Crabs and limited by-catch of other species from these 2 fisheries.

**2015 SEAFO Catch by species**

Species	Quota	Actual catch 2015
Toothfish	264 tonnes	51 tonnes
Deep sea Crabs	190 tonnes B1 200 tonnes rest	104 tonnes
Orange roughy	4 tonnes bycatch 50 tonnes TAC	N/F (no fishing)
Alfonsino	200 tonnes	N/F
Boarfish/AH	143 tonnes	N/F

**2.1.2 Objective and Responsibilities**

The objective of the SEAFO Convention is to:

*Article 2: Ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area through the effective implementation of the Convention.*

In order to achieve this, the Convention (Article 3) sets out a number of general principles for good modern fisheries management consistent with international law and agreements.

These principles include:

- *“adopt measures, based on the best scientific evidence available, to ensure the long term conservation and sustainable use of fishery resources;*
- *apply the precautionary approach;*
- *take account of the impact of fishing operations on ecologically related species such as seabirds, cetaceans, seals and marine turtles;*
- *adopt measures for species belonging to the same ecosystem as, or associated with or dependent upon, the harvested fishery resources;*
- *ensure that fishery practices and management measures take due account of the need to minimize harmful impacts on living marine resources as a whole; and*
- *protect biodiversity in the marine environment.”*



In addition to these general principles as SEAFO has evolved, biologists within the SC have developed new species profiles on species not considered as target or main by-catch species at the beginning of SEAFO.

### **2.1.3 Structure of the Organisation**

The structure of the Organisation remains the same and is shown in Figure 2. It is described below and comprises the:

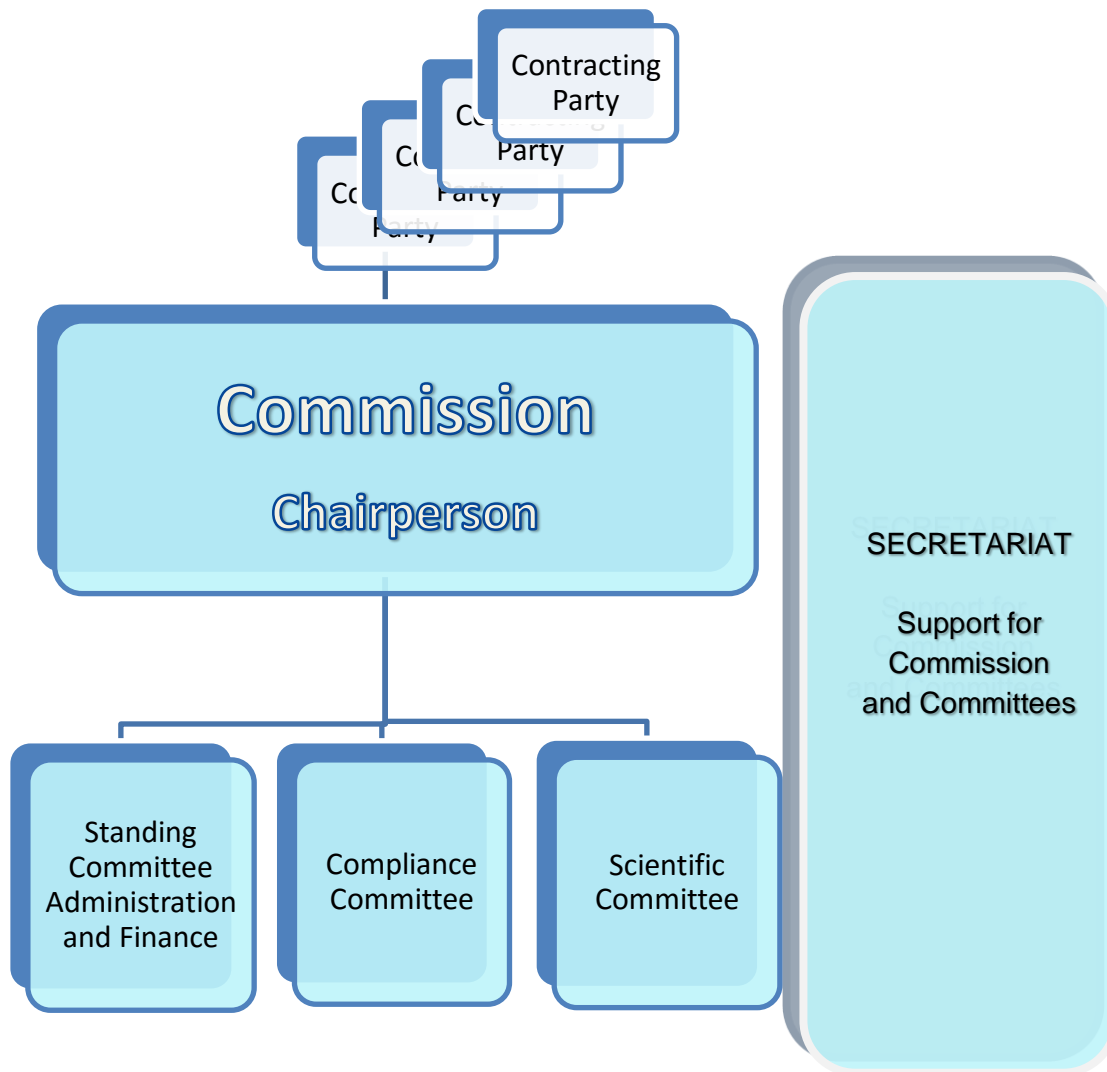
- Contracting Parties;
- Commission;
- Compliance Committee;
- Scientific Committee;
- Standing Committee on Administration and Finance; and
- Secretariat.

SEAFO has legal personality and enjoys in the territory of each Contracting Party such legal capacity as may be necessary to perform its functions and achieve the objective of the Convention. The privileges and immunities of the Organisation and its staff are determined by the Headquarters Agreement. The Secretariat moved from Walvis Bay, and is now co-located in a building that also houses the Benguela Current Commission (BCC) and Namibian Ministry of Fisheries and Marine Resources in Swakopmund Namibia.

#### **2.1.3.1 Commission**

The Commission is the main decision-making body of SEAFO and has a wide range of functions identified by article 10 of the Convention. It is responsible, among other things, for providing direction to the Secretariat, identifying conservation and management needs, formulating and adopting conservation and management measures, determining TACs and/or levels of fishing effort, promoting proper scientific research and establishing appropriate mechanisms for effective monitoring, control, surveillance (MCS) and enforcement.

**Figure 2**  
**Structure of the Organisation**



### 2.1.3.2 Compliance Committee

The Compliance Committee was established in 2007 in accordance with Article 9 of the Convention, to provide the Commission with information, advice and recommendations on the implementation of and compliance with conservation and management measures. In performing its functions, the Committee is to conduct activities as the Commission directs and to coordinate compliance activities undertaken by or on behalf of SEAFO, coordinate with the Scientific Committee on matters of common concern and perform such other tasks as the Commission directs.

### **2.1.3.3 Scientific Committee**

The Scientific Committee was established in 2005 pursuant to article 10 of the Convention, to provide the Commission with scientific advice and recommendations for the formulation of conservation and management measures for fishery resources, and to encourage and promote cooperation in scientific research in order to improve knowledge of the living marine resources of the Convention Area.

The Scientific Committee established a Scientific Sub-Committee (SSC) in 2006 to create a forum for collating data and assessing the fish stocks in the SEAFO area, to be considered by the Scientific Committee for review and approval. However following the 1<sup>st</sup> Review Panel report this SSC was disbanded as it was not considered to add real value to the work in the Commission.

### **2.1.3.4 Standing Committee on Administration and Finance**

The Standing Committee on Administration and Finance was established in 2009 to provide the Commission with information, advice and recommendations on issues pertaining to the administration and finances of the Organisation. Matters regarding finance and budget are addressed in article 12 of the Convention.

### **2.1.3.5 Secretariat**

The Secretariat in 2016 consists of an Executive Secretary appointed by the Commission, Compliance and Data Manager and an Administrative Officer as required under Article 11 of the Convention. Staff contracted to the Commission have the status of international civil servants whose terms and conditions of work are governed by regulations determined by the Commission. The regulations and terms of employment of staff in all RFMOs should in principle be consistent and in line with the conditions of international civil servants. (Section 4.5.2)

## **3. RELATIONSHIP BETWEEN THE SEAFO CONVENTION AND OTHER INTERNATIONAL FISHERIES INSTRUMENTS AND INITIATIVES**

### **3.1 Introduction**

Several international instruments concerning the management of world fishery resources have been developed over the last twenty years. These include the legally

binding UNFSA and the 1993 FAO Compliance Agreement. A key voluntary fisheries instrument is the 1995 FAO Code of Conduct for Responsible Fisheries (the Code of Conduct) including the international plans of action (IPOAs) elaborated under it: the 2001 FAO IPOA to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), and the 1999 IPOAs for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds), the Conservation and Management of Sharks (IPOA-Sharks) and the Management of Capacity (IPOA-Capacity). Other applicable instruments relating to Port State Measures are the voluntary 2005 FAO Model Scheme on Port State Measures to Combat IUU Fishing (the Model Scheme).

The latest of these important agreements to enter in force is the global, legally binding FAO Agreement on Port State Measures to Prevent, Deter and Eliminate IUU Fishing (FAO Agreement on Port State Measures) adopted by the FAO Conference in November 2009. This instrument entered into force 5 June 2016, with 25 parties ratifying or accepting the Agreement on 5 May 2016. As at 30 August 2016 33 parties have ratified or acceded to the Port State agreement. Included in these 33 parties are the SEAFO members; EU, Norway, Korea, and South Africa along with the US and Iceland. Angola has signed but is yet to ratify the agreement. Namibia is yet to sign the agreement and the UK may have to sign on behalf of its Territories.

The instruments, activities and outcomes described above are indicative of evolving demands and expectations concerning the role and the performance of RFMOs, including SEAFO. They are described in greater detail below, where it is shown that the voluntary fisheries instruments serve as guidelines or toolboxes for the conservation and management of fisheries, including some specific options for States and RFMOs such as SEAFO. *(source updated from the 1<sup>st</sup> Review Report)*

### **3.2 The SEAFO Convention and the UNFSA**

The SEAFO Convention is one of the first conventions developed and ratified after the adoption of the UNFSA. As such the Convention is consistent with the provisions of the UNFSA. The objective and general principles of the SEAFO Convention Articles 2 and 3 are patterned after and consistent with the requirements of the UNFSA.

#### **Panel Considerations**

SEAFO Convention is consistent with the requirements and provision of the UNFSA.

### **3.3 Other instruments and initiatives relevant to implementation of the SEAFO Convention**

#### **3.3.1 The FAO Compliance Agreement**

The FAO Compliance Agreement, which forms an integral part of the Code of Conduct, was finalized prior to the UNFSA, and some of the provisions are overlapping. It applies to “international conservation and management measures” adopted and applied in accordance with the 1982 Convention. It is thus not limited to species covered by the UNFSA. The focus of the Compliance Agreement is the authorization of fishing on the high seas and the development of the concept of flag State responsibility and of mechanisms to ensure the free flow of information on high seas fishing operations. As at 30 August 2016 of the SEAFO Contracting Parties and observers, Angola, the European Union, Japan, Korea, Namibia, Norway and the US are parties to the FAO Compliance Agreement.

#### **Panel Considerations**

SEAFO management arrangements comply with the requirements of the Compliance Agreement.

#### **3.3.2 The FAO Code of Conduct**

The Code of Conduct, which was adopted in 1995, provides a framework for national and international efforts to ensure sustainable exploration of aquatic living resources in harmony with the environment. In relation to RFMOs such as SEAFO, articles 7 and 8 in particular give adequate and important guidance. Article 7 includes provisions on management objectives, framework and procedures, data gathering and management advice, application of the precautionary approach and the establishment of management measures as well as their implementation. Article 8 deals with fishing operations and contains provisions on the duties of the flag State and the port State. The overall objective is to promote a framework for sustainable development, foster protection of the aquatic environment and the maintenance of biodiversity while making a contribution to the safety of fishing operations. It should be noted that FAO has supplemented many of these principles by developing specific technical guidelines.

### **3.3.2.1 IPOA-Capacity**

While environmental factors have adversely affected some fish stocks, excessive levels of fishing capacity are believed to be the primary cause of fisheries declines. Moreover, fishing overcapacity is also known to have contributed to the problem of IUU fishing, particularly in cases where excess capacity has been exported through re-flagging to States which do not exercise effective control over their fishing vessels and/or do not comply with their flag State obligations.

Excess fishing capacity is addressed in many ways, including by input regulations such as fishing seasons/days, closed areas, permitted gears and vessel-related restrictions as well as output regulations such as rights-based measures. Coordinated efforts are, however, essential. FAO adopted the IPOA-Capacity in 1999, with the objective for States and RFMOs to achieve an efficient, equitable and transparent management of fishing capacity. The IPOA-Capacity specifies several actions to be taken for assessing and monitoring capacity, preparing and implementing national plans, international considerations and immediate actions for major international fisheries requiring urgent measures.

#### **Panel Considerations**

SEAFO is currently not in the situation where it is necessary to adjust or restrict capacity in this fishery.

### **3.3.2.2 IPOA-Seabirds**

There are concerns about incidental catch of seabirds in the longline fisheries. According to the IPOA-Seabirds, States should, either individually or through appropriate RFMOs, conduct assessments of these fisheries to determine if a problem exists with respect to the incidental catch of seabirds. If a problem is identified, initiatives should include the adoption of mitigation measures, plans for research and development, awareness campaigns and data collection programmes. The IPOA-Seabirds also contains an annex describing some optional technical and operational measures for reducing the incidental catch of seabirds in longline fisheries.

#### **Panel Considerations**

SEAFO has implemented the IPOA by adopting measures with the aim of reducing incidental by-catch of seabirds in the Convention Area, cf. Conservation Measure 15/09. The measure was updated in Conservation Measure 25/12. By catch interaction is monitored by the scientific observers and reported through their reports to the Secretariat. This information is considered by the SC and recommendations made to the Commission for consideration and if necessary strengthening of the measures.

### **3.3.2.3** *IPOA-Sharks*

Significant global work on sharks is underway in the RFMOs and under the GEF ABNJ program. Concerns continue to be expressed on the increase in shark catches and the development of shark trunk markets, as sharks often have a long stock recovery time, if over-fished, and low recruitment relationship. Assessment of shark stocks and biological information is limited and hampered by lack of data in many fisheries. In order to address these concerns FAO adopted in 1999 the IPOA-Sharks calling on States to take a number of actions to ensure the conservation and management of sharks and their long-term sustainable use, including developing national plans which should contain shark stocks assessments based on consistent data collection. Such data should be made available to, among others, relevant RFMOs. It is recognised that sharing such information is particularly important in relation to straddling, highly migratory and discrete high seas shark stocks.

### **Panel Considerations**

The SEAFO Convention area overlaps with the ICCAT Convention Area, the CCSBT Convention Area and the IOTC Convention Area. ICCAT is responsible for managing species appearing in Annex 1 to the 1982 Convention, which include oceanic sharks, while SEAFO has the regional responsibility for all other shark species. IOTC is not responsible for shark species but can regulate sharks caught in tuna and tuna-like fisheries. The Commission has implemented the IPOA by adopting Conservation Measure 04/06 on the Conservation of Sharks Caught in Association with Fisheries Managed by SEAFO and Recommendation 1/2008 which places a voluntary ban on the catch of deep water sharks.

### **3.3.2.4** **IPOA-IUU**

Combating IUU fishing has been one of the main issues on the international fisheries agenda for the last decade. IUU fishing is identified as a major threat to fisheries conservation and marine biodiversity. A number of initiatives have been taken by global organisations, many regional bodies and States to counteract such activities. In this context in particular the IPOA-IUU is important. It is a voluntary instrument - a comprehensive toolbox that contains several suggested measures for combating IUU fishing, including those to be used by flag States, coastal States, port States and RFMOs. The IPOA-IUU calls on States, through RFMOs, to take various actions, such as developing boarding and inspection schemes, implementing vessel monitoring systems (VMS) and observer programmes, identifying vessels that are engaged in IUU fishing, regulating transshipment operations as well as adopting port inspection schemes, certification and/or trade documentation schemes and other market-related measures.

#### *Panel Considerations*

*The SEAFO Convention contains several provisions relevant to the fight against IUU fishing, in particular Article 9 establishing the Compliance Committee, Article 14 on flag State duties, Article 15 on port State duties and measures taken by a port State, Article 16 on observation, inspection, compliance and enforcement and Article 22 on non-parties to the Convention.*



*At its annual meeting in 2013 the Commission adopted the “System of Observation, Inspection, Compliance and Enforcement”. This living document was updated in 2015. The scope of the SAEFO System for Observation Inspection, compliance and enforcement, is as stated: Unless otherwise stated, this System of Observation, Inspection, Compliance and Enforcement, hereafter designated as the System, shall apply to all fishing vessels and fishing research vessels operating or intending to operate in the Convention Area. The System therefore lays out all of the rules and regulations for vessels wishing to fish, research or support fishing operations in the SEAFO convention area. In other RFMOs this would take the approach of either Conservation measures or rules and regulations relating to fishing. The SEAFO approach is somewhat unique but is very good and comprehensive to all aspects of observing, licensing, inspection and enforcement in SEAFO and provides a solid foundation against which the members can measure the compliance of all parties that have vessels fishing in SEAFO waters. The panel concludes that SEAFO has taken appropriate action to implement the IPOA IUU.as required.*

### *3.3.3 FAO Model Scheme on Port State Measures to Combat IUU Fishing (Model Scheme)*

*As a follow-up to the IPOA-IUU, FAO adopted in 2005 the Model Scheme on Port State Measures to Combat IUU Fishing, describing basic and minimum standards for subsequent action to be taken in particular within RFMOs. The FAO Model Scheme is a voluntary instrument, and these principles and guidelines do not prevent RFMOs and/or States from adopting additional and eventually stricter measures. The FAO Model Scheme contains information to be required by a port State prior to allowing access to a foreign fishing vessel, designation of ports where landing might take place, port inspection procedures, result indicators of port inspections, elements of training programmes for port State inspectors and an outline of an information system on port State inspections.*

### **3.3.4 The 2009 FAO Agreement on Port State Measures**

The FAO Agreement on Port State Measures is based on the FAO Model Scheme and takes on board some additional tools already used by some RFMOs, such as actions based on IUU vessel lists, cooperation between port States and flag States as well as applying port State measures to transhipped fish and fish products. The application of such measures will now be extended from a regional to a global level, including the indirect establishment of a global IUU vessel list as actions are linked to such a list established by any RFMO.

The FAO agreement establishes a step by step process for the port State to allow or deny entry and the use of its ports, which is more comprehensive and goes further than the SEAFO rules. Furthermore the agreement does not apply to container vessels that are not carrying fish, or if carrying fish, only fish that have been previously landed.

Based on the notification as well as other information it may require to determine whether the vessel has engaged in IUU fishing, the port State shall decide whether to authorise or to deny entry into its port. A port State shall, however, deny access if it has sufficient proof that a vessel has engaged in IUU fishing, and in particular if the vessel is on an IUU vessel list established by an RFMO.

A vessel that has entered a port shall not be permitted to use that port if the vessel does not have an authorisation required by the flag State or a coastal State, or if there is clear evidence that the fish on board was taken in contravention of coastal State measures. Furthermore, use shall be denied if the flag State, on request, fails to confirm that the fish onboard was taken in accordance with requirements of an RFMO or the port State has reasonable grounds to believe that IUU fishing had taken place, unless the vessel can establish otherwise.

### **Panel Consideration**

The 2<sup>nd</sup> Review Panel is pleased to note that SEAFO Contracting Parties that have signed the FAO Agreement on Port State Measures are Angola, the European Union Norway, Korea, and South Africa. In addition, Iceland and the United States, signatories to the SEAFO Convention, have also signed the FAO Port States Agreement.

The principles of the FAO Agreement on Port State Measures have been incorporated into the SEAFO regulatory framework, through Conservation and Management Measures that were lately developed and incorporated in the System of Observation, Inspections, Compliance and Enforcement. (4.2.2).

### **3.3.5 Global calls and initiatives**

There are two global fora where fisheries and fisheries related issues are discussed on a regular basis and guidance given to States and RFMOs, namely the UN General Assembly and FAO. In addition, fisheries management has been on the agenda of the 1992 United Nations Conference on Environment and Development and the 2002 World Summit on Sustainable Development.

#### **Panel Consideration**

Comment: Where possible and depending on available resources, the SEAFO Executive Secretary attends these conferences if the agenda adds value to the work of SEAFO. UNGA initiatives such as VMEs have been adopted by SEAFO and measures taken to protect these areas to the extent of the knowledge of SEAFO members.

## **4. PERFORMANCE REVIEW: ANALYSIS AND RECOMMENDATIONS**

### **4.1 Science, Conservation and Management**

Since the 2010 review some conservation measures have been revised and MCS measures, initially codified as separate Conservation Measures, have been integrated into the SEAFO System (most recent version 2015). The species specific measures include TACs for target species or former target species: Patagonian toothfish (*Dissostichus eleginoides*), Deep-Sea Red Crab (*Chaceon erythraeae*), Orange roughy (*Hoplostethus atlanticus*), Alfonsino (*Beryx splendens*) and Pelagic armourhead (*Pseudopentaceros richardsoni*) (CM 31/15 TACs for 2016) and by-catch rules for sharks (CM 04/06), turtles (CM 14/09) and sea birds (CM 25/12). Habitat related measures have been adopted in relation to bottom fishing and VMEs (CM 30/15).

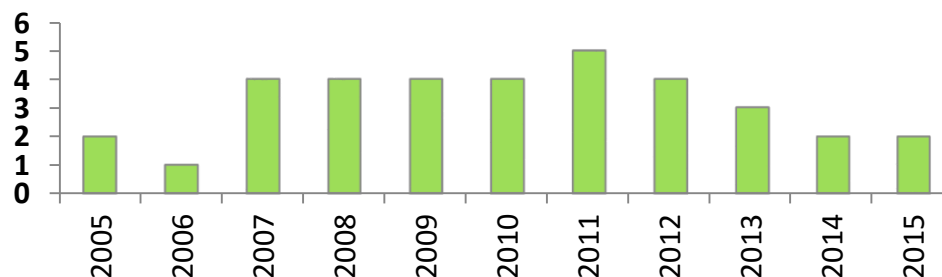
Currently, the only commercially targeted species are Patagonian toothfish and deep-sea red crabs, neither of which is confined to the Convention Area. However, it should be noted that the deep-sea red crab species *Chaceon erythrae* found in the Convention area is different from the red-crab species (*chaceon maritae*) found in the 200 mile EEZ's of the coastal states.

#### 4.1.1 Status of living marine resources

In 2014 and 2015 only the Patagonian tooth fish and the Deep-sea Red crab were subject to targeted fisheries with one vessel targeting each (SC report 2015). The catches in 2014 and 2015 for Patagonian toothfish were 74 tonnes (of which 68 retained) and 52 respectively, taken by a Japanese vessel, while for Deep sea Red crab they were 135 tonnes (by a Namibian vessel) and 104 tonnes (by a Korean vessel). The TACs for the two species in 2016 are 264 t and 390 t respectively.

This is an important reduction both in overall volume and in the spread of species and vessels since the start of SEAFO and since the performance review in 2010 (see graph below showing the number of species targeted in each year).

**Number of species targeted each year in SEAFO waters**



In the most recent years the TACs for the two remaining target species has not been taken (SC report 2015).

The stock status reports of the Scientific Committee serve as the primary source of scientific underpinning for Commission decisions regarding the TACs.

In the early stages of considering avenues for stock status the Scientific Committee was looking into biological parameters of important species, which might form the basis for assessment of exploitation state or identify these as vulnerable (SC report 2010). Species profiles have been produced for four species: Patagonian toothfish (*Dissostichus eleginoides*), Orange roughy (*Hoplostethus atlanticus*), Alfonsino (*Beryx splendens*), Pelagic armourhead (*Pseudopentaceros richardsoni*). No species profile has been made for Deep-sea Red crab.

The SC seems initially to have considered information regarding life history parameters and vulnerability to fishing as an important basis to assess the status of stocks and provide advice regarding sustainable fisheries to the Commission. The species profiles were developed to investigate this.

Such information could potentially provide guidance regarding risks but might be difficult to develop further into quantitative estimates of, say, total outtakes which would be sustainable. The SC therefore considered that further work towards stock assessments and/or harvest control rules was required.

The performance review of 2010 recommended status reports to be made (recommendation 1 below). Since then, stock status reports have been developed for five target or former target species (Patagonian toothfish (*Dissostichus eleginoides*), Deep-Sea Red Crab (*Chaceon erythrae*), Orange roughy (*Hoplostethus atlanticus*), Alfonsino (*Beryx splendens*) and Pelagic armourhead (*Pseudopentaceros richardsoni*). These are updated every second year, most recently Patagonian toothfish and Deep-sea Red crab Stock status reports were updated in 2015.

The stock status reports include descriptions of the fisheries and the biological aspects of the stock, it presents the data available and the analysis/ stocks assessment status done on basis of these data and discusses ecosystem impacts of the fisheries. The stock status report ends up with a discussion of current management measures and management advice to the Commission.

So far, it has not been possible to provide stock assessments in any classical sense for any of the stocks due to lack of data and/or the short time series available. In the 2014 stock status reports candidate Harvest Control Rules (HCR) were presented and advice was provided on that basis.

The HCR used was based on the empirical HCR used for Greenland halibut stock by NAFO and is similar for Patagonian toothfish, Deep-sea crab and Pelagic armourhead. It projects the TAC from last year with the slope of a CPUE measured from commercial fisheries or surveys, where the forward projection is direct if the CPUE is increasing but is two times the slope if the CPUE is decreasing. The TAC change between years is constrained within +/- 5% of the TAC. There is thus a precautionary element in the asymmetric response to increases versus decreases and in constraining TAC changes.

For Orange Roughy there has been no directed fishery for some years and the SC has not had a basis for identifying a HCR. The SC has recommended a zero TAC for directed fisheries linked to a maximum bycatch rule and a bycatch TAC of 4 tonnes in B1 and a precautionary TAC of 50 tonnes for the remainder of the SEAFO area. The SC further considers that a HCR should be developed to “facilitate recovery”

For Alfonsino, the HCR has been set according to the approach developed by ICES regarding stocks where only catch information is available (ICES Category 5).

In its 2015 meeting the SC discussed progress in stock status evaluation and concluded that *“The SC concluded the discussion by advising that the application of HCRs for TAC advice has to be continued, but that in parallel exploratory stock assessments should also be conducted. In the future, with enhanced data provision and extended time series, it is conceivable that valid assessments can be achieved for some stocks, hence also TAC advice based on assessments rather than HCRs may become possible. Another very important reason for encouraging stock assessments is that assessments may provide potentially valuable information for monitoring stocks and evaluations of the appropriateness of the HCRs and their application.”* (SC report 2015 p 9).

The Commission has subsequently based its setting of TACs on the advice of the SC, based on these HCRs, which in effect means that the Commission has adopted the HCRs as a valid basis for its TAC decisions. The SC recommendation (for two years) and the annual TACs in the last couple of years are:

**SEAFO TACs 2015 and 2016**

	<b>SC recommendation for 2015</b>	<b>2015 TAC decided at annual meeting 2014</b>	<b>SC recommendation for 2016</b>	<b>2016 TAC decided at annual meeting 2015</b>
<b>Patagonian toothfish</b>	For 2014 and 2015: 276 t in D 0 t in the remainder of SEAFO CA	As recommended	264 t for D 0 t for remainder SEAFO CA	As recommended
<b>Deep sea Red crab</b>	For 2014 and 2015: 200 t in B1 200 t in remainder of SEAFO CA	As recommended	190 t for B1 200 t for remainder SEAFO CA	As recommended
<b>Orange roughy</b>	For 2015 and 2016: No directed fishery in B1, bycatch limit in B1 4t. A precautionary TAC of 50 t for remainder of SEAFO CA	As recommended	Not updated (2015 recommendation included 2016)	As recommended
<b>Alfonsino</b>	For 2015-2016: 200 t for SEAFO CA of which max 132 t may be taken in B1	As recommended	Not updated (2015 recommendation included 2016)	As recommended
<b>Pelagic armourhead</b>	For 2015-2016: 143 t	As recommended	Not updated (2015 recommendation included 2016)	As recommended

**Panel Considerations**

The compilation and regular update of stock status reports is a very positive move forward and makes the information basis and the scientific analysis, on which Commission decisions regarding TACs are based, transparent.

The stock status reports include the information which is required (as available) both to inform decisions regarding TACs and regarding the wider impacts of the targeted fisheries on the ecosystem.

Given the low fisheries effort, that only two stocks are targeted and that the TAC has not been taken for these stocks in recent years, it may be worthwhile considering whether further work

to get a stock-assessment-based underpinning of recurrent TAC advice should be the highest priority for the SC as long as this situation exists. As discussed in section 2.1.2, the present *raison d'être* for SEAFO may be to ensure that a legal regulatory framework is in place regarding fisheries in the convention area in order to ensure 1) that all fisheries activities in the convention area are subject to principles as laid down in international agreements, 2) that any future developments of the fisheries in the area is done with due consideration of the need to ensure the sustainability of such fisheries and 3) that any fisheries activities do not damage other components of the marine ecosystem which may be sensitive to fisheries impacts.

If, in the present situation with low fisheries effort and low commercial interest in the fisheries, this is the role of SEAFO, then SC may consider whether to focus its work on 2) and 3) above. This means that SC could consider to invest effort into evaluating candidate rules for exploratory fishing and evaluations if and when there is new interest to exploit fisheries resources in the area and in continuing its work to monitor fisheries impacts on the ecosystem and to evaluate candidate measures to implement an ecosystem approach to fisheries management within SEAFO.

One way to free resources for this and to ensure that the TAC discussions in SC and the Commission are not the main focus of work would be to move towards multiannual TACs, for instance quotas valid for 3 consecutive years. The data available from the fisheries do not justify annual updates of TACs in terms of new information available and there seems not to be any other rationale for annual TAC updates presently.

Another contribution to freeing resources could be to introduce a risk-based approach so that efforts are concentrated on species and fisheries where risks are considered highest while lower risk stocks and fisheries are monitored to the level necessary to be able to take action if risks are increased. The first step would be to make a risk assessment of the present species and fisheries. Regarding species this could relate to assessments and/or qualitative judgements of productivity and susceptibility in a productivity - susceptibility analysis (PSA, for discussion and further references see ICES WK LIFE III report 2013, section 4), based on which one can decide which species(s) are most at risk and focus on those. Regarding fisheries, the risks to be assessed or judged are - beyond those already covered by the species analysis - related to the impacts of the fishing method and fishing practices on the wider marine ecosystem including bottom habitats and fauna and other biota which are ecologically linked to the species exploited.

### **Performance Review 2010 Panel Recommendations**

- The Scientific Committee should develop a strategy for the development of a status report, including a general overview, of the fishery resources in the Convention Area. The report should include information on the stock structure, total abundance, distribution of the biomass between zones and the fishing pressure by zone. Red crab should be given first priority for such a status report.

*Review panel 2016 remark: This has been implemented. Given the present status of fisheries and stocks in the convention area there may be a case for developing an*



*ecosystem status report, see recommendations regarding an ecosystem approach from the 2016 review.*

- The transboundary nature of several fishery resources is recognised and scientific cooperation for evaluating of the status of the resources with other organisations should be encouraged, e.g. in the form of joint working groups with the CCAMLR for Patagonian toothfish and with Namibia and Angola for red crab.

*Review 2016 remark: The SC is observant and reports consistently about relevant work in neighbouring organisations. For the Deep-sea red crab, the SC has noted that the species in the SEAFO area is not the same as the one exploited within the EEZ's and that there therefore is no case for joint assessments. For Patagonian toothfish the stock and the fisheries is, as noted by the SC in its stock status report, an extension of the fisheries in CCAMLR and there is thus a case for joint assessments and coordinated management decisions. However, the stock and the fisheries in the CCAMLR area are much larger than what is presently the case within the SEAFO area and the SEAFO status reports take into consideration the assessments made in CCAMLR of this larger stock. This may be sufficient to ensure consistency in the present situation.*

## **Performance Review 2016 Recommendations**

1. The SC should continue its work on updating the Stock Status reports for stocks targeted by fisheries or where there may be future commercial interest, with an emphasis on the species specific information as required for the Commission to fulfil its role as responsible for fisheries harvesting target species sustainably in the convention area.
2. For those potential target species where there are no current fisheries this could be based on a risk assessment rather than attempting to move to a full-fledged stock assessment in a situation where no data are available from non-existing fisheries.

### **4.1.2 Ecosystem approach**

The Commission has instigated a reporting system regarding biota associated with Vulnerable Marine Ecosystems (VME). Observers on fishing vessels are required to report bycatches of sponges and corals. An identification guide has been developed to support the observers in this task. Stock status reports includes information of the ecosystem impacts of fisheries.

The Commission has taken specific measures to protect bottom habitats from impacts from bottom-touching fishing gear and to protect VMEs from fisheries impacts (CM 30/15) and to reduce impacts on other biota such as sharks (CM 04/06), turtles (CM 14/09) and sea birds (CM 25/12).

The measures regarding bottom fishing activities and VMEs (CM 30/15) include an identification of specific areas where bottom trawling and/or longlining can take place as well as areas which are closed to all fishing activities. There are also protocols for data reporting, for exploratory fishing and for encounters of VME biota.

### **Panel Considerations**

**As discussed above, it may in the present situation be a major role of the Commission to ensure that an ecosystem approach is taken in international management of fisheries within the Convention area.**

**The Commission has taken important measures to collect relevant data, monitor and regulate fisheries with a potential impact on VMEs and regarding by-catches. These measures are in themselves a large contribution to an ecosystem approach.**

**In order for the Commission to further proceed in this respect it may be relevant to take a comprehensive approach with a focus on the ecosystem itself (or specific spatial components thereof) which ultimately are linked to criteria for maximum acceptable ecosystem impact regarding specific aspects of the ecosystem. These aspects may include biodiversity, bottom habitat integrity, integrity of food web structure etc.**

**To support the Commission in this the SC could provide Ecosystem status report(s) providing any existing information and providing recommendations in relation to maximum impact criteria as decided by the Commission.**

**In developing criteria for maximum acceptable impact the Commission may want to request the SC to put forwards considerations about potential candidates.**

**The extent of VMEs is only poorly known in the SEAFO CA. It is not achievable to map these in any useful sense by direct observation. Inference about potential areas can be made from bathymetric maps, but large areas of the CA are not well covered with bathymetric data. As a consequence, and as a precautionary measure, fairly large areas have been closed to all fishing where more specific information might have made it possible to focus such closures better on potential VME areas. There may not presently be strong commercial interest to have more**

targeted (and thus smaller) closures, but in case such interest should emerge in the future more information would be needed in order to decide on specific areas.

### **Performance Review 2010 Panel Recommendations**

- The Commission should expressly define priorities for the work of the Scientific Committee based on concerns relating to both the ecosystem in general and the fishery resources in particular.

*2016 Review panel comment: The Commission should consider its role in view of the present extent of fishing activities and reorient priorities for the SC accordingly*

- While ecosystem-related priorities are highly relevant they should not overshadow other major tasks.

*2016 review panel comment: Given the changes in fishing activities and the present low level of these the RP is of the opinion that ecosystem-related priorities may actually be the main priority for the Commission.*

### **Performance Review 2016 Recommendations**

- 3 The SC should develop Ecosystem status reports regarding the interactions between fisheries and the marine ecosystem within the convention area. This could be one for the convention area or a set of reports for different subsystems within the area. The Ecosystem status report(s) should provide information and scientific advice as required by the Commission to fulfil its role in relation to ensuring that fisheries impacts on the marine ecosystem are acceptable. In order to use available resources efficiently on this task a risk based assessment, as discussed in the context of fish species, could be extended to fisheries and also include the wider ecosystem effects of fisheries.
- 4 The Commission should identify criteria for maximum acceptable ecosystem impacts of fisheries in relation to inter alia habitat impacts and incidental bycatch.
- 5 In order to initiate this process, the Commission should request the SC to consider candidates for maximum acceptable impact which are relevant, measurable and can be monitored.
- 6 Means to provide better data to indicate potential VME areas should be investigated

### 4.1.3 Data collection and sharing

The Commission has followed the recommendations of the Scientific Committee closely in adopting measures relating to data needs and data submission, and has established data requirements that are based on control and enforcement needs.

The Scientific Committee has developed sampling protocols and data requirements for future assessments which have allowed the Commission to establish rules for the collection of logbooks, observers and other data requirements. Turtle, coral and sponge identification keys have been developed.

A Data Manager position was established and filled in 2012.

Data bases covering observer and VMS data are in place and a regular data reporting and quality assurance system is in place. A log book form has been identified in 2015 and data from that will be incorporated in a data base. The SC and the Commission has not made remarks about insufficiency regarding data access in their recent reports.

#### Panel Considerations

**Data collection, reporting and availability is up to the standards as necessary to support scientific, assessments, compliance monitoring and commission decision making needs.**

#### Performance Review 2010 Panel Recommendations

- The transparency of the scientific data should be improved by providing more information in the report of the Sub-Committee of the Scientific Committee (SSC) or alternatively, or in addition, by providing this information on the SEAFO website. Panel 2016 comment: this has been implemented
- The Scientific Committee should give a high priority to the completion of identification keys for fish. This is necessary for an observer programme. Panel 2016 comment: this has been implemented
- Emphasis should be placed on extending the database for existing fisheries. The Panel notes that the scientific observers will provide essential data for this database. Panel 2016 comment: this has been implemented

## Performance Review 2016 Recommendations

The 2016 Review Panel does not have specific recommendations regarding data

### 4.1.4 Quality and provision of scientific advice

The objective of SEAFO as defined in article 2 of the Convention is “...to ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area...”. The measures adopted to achieve this goal should, according to article 3, be “based on the best scientific evidence available”.

The Scientific Committee has been tasked to provide this evidence and to promote the necessary research for this according to article 10: “The functions of the Scientific Committee shall be to provide the Commission with scientific advice and recommendations for the formulation of conservation and management measures for fishery resources covered by this Convention, and to encourage and promote cooperation in scientific research in order to improve knowledge of the living marine resources of the Convention Area.”

The work of the Scientific Committee is thus the key source of scientific underpinning for Commission decisions for the management regarding targeted stocks, bycatch species and an ecosystem approach

The Scientific Committee has addressed this role by

- Provision of Stock Status reports for commercially targeted (or formerly targeted) stocks - these are updated annually for those stocks where a targeted fishery is taking place
- Recommendations regarding TACs for targeted or formerly targeted stocks - provided as part of the Stock Status reports
- Providing advice on data collection of relevance to scientific assessment
- Review and compile data of relevance to scientific assessment
- Development of identification guides regarding target species, bycatch species and VME fauna for observers and other staff involved in data collection
- In its annual report to address any other issues of a scientific nature which are raised including reporting from surveys and reporting from relevant scientific activities in Contracting Party states and organisation
- Organise dissemination and exchange fora for scientific information.

#### Panel Considerations

The quality of Stock status reports is up to the best standards given the information and data available. The data and the analysis provided are presented in a transparent way.

The recommendations by the Scientific Committee regarding single stock exploitation, based on HCRs or (for orange roughly) setting precautionary limits in the absence of targeted fishing, are sensible. It is, in the present situation of low fisheries effort targeting only two stocks, not worthwhile to pursue a base for scientific advice which is based on formal stock assessments. However, the consideration made by the SC - that stock assessments *“may provide potentially valuable information for monitoring stocks and evaluations of the appropriateness of the HCRs and their application”* is valid. This implies that stock assessments for this specific purpose do not need to focus on short term predictions but rather on medium term stock trends and to provide a basis for an evaluation of HCRs with a view to make them more specific to the stocks involved than the presently used HCRs which are generalised.

The Stock status reports includes sections on ecosystem impacts of fisheries. The SC has also provided analysis and recommendations regarding bottom fishing impacts and by-catches of non-fish biota. The SC has also developed data collection formats and identification guides in this respect. This work has been instrumental for decisions regarding management measures in respect of an ecosystem approach.

There are cases where the SC has not arrived at consensus but the reports reflect a majority and a minority view.

Such differences of opinion may be based in different interpretations of the data which are entirely based on different judgement as to the most adequate scientific methodology to use for a specific data set. Where this is the case, it is important that both interpretations are presented in a fully transparent way so that a scientific peer has the basis for making his or her

own judgement. For a non-technical readership, it is important that the SC, for instance by its chair, also presents the scientific basis for discrepancies in a language which can be understood by that readership. In those cases, where the SC work is to support a Commission decision, it is however necessary that in the end, the SC makes a call and present one conclusion by the SC, while observing full transparency regarding different possible interpretations and including a discussion of the uncertainties associated with the conclusion made. Otherwise the SC is doing a disservice to the Commission. The present rules of procedure for the SC do not include guidance of how the SC should come to a conclusion under these circumstances, on the contrary, it is just stated that majority and minority views should be presented.

There may also be cases where differences in opinion may originate from either some politically motivated guidance from governments to the national scientists or from scientists on their own deliberately or unconsciously introducing bias in their judgement. Such influence is frequent in science mandated to advice governmental decision making and scientific advisory bodies are for this reason setting up safeguards to protect the scientists involved against undue external pressure and to ensure that bias does not influence analysis and recommendations. Among the mechanisms that have been found to be effective in this respect is a requirement for the scientific body to provide a collective opinion with individual contributions anonymised and a requirement for independent peer review regarding major or controversial analysis and recommendations. It is also an important element that scientists as far as possible do not have a stake in the outcome of the recommendations, meaning that scientists involved should not subsequently serve as negotiators and decision makers on the subject in question.

### **Performance Review 2010 Panel Recommendations**

- The basis for the Scientific Committee advice should be transparent and clear to all involved. In this regard, the report of the Scientific Committee should clearly describe the information on which its advice is based and the report of the SSC should document all assessments relevant to such advice.
  - 2016 Review Panel comment: The Stock status reports have solved this issue and fulfils these criteria
  
- The Scientific Committee should have a clear set of scientific criteria on which to formulate its advice. Such criteria should be based on those in international fisheries instruments as agreed by the Commission, for example the objective to maintain or restore stocks to levels that can produce the maximum sustainable yield (MSY) with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015 as stated in the 2002 Johannesburg Plan of Implementation.
  - 2016 Review panel comment: In the present situation, with a low catch and low fisheries, any formal establishment of MSY related reference points may not be possible. They may also be unnecessary as an approach where vulnerable elements of the ecosystem are protected may also ensure that targeted fisheries

are exploiting single stocks within MSY limits. As an alternative, criteria relating to ecosystem impact may be relevant.

- When there is no scientific basis, the Commission should provide clear instructions to the Scientific Committee on the interpretation and implementation of the precautionary approach.

*2016 Review Panel comment: This may develop into a chicken-and-egg situation where the Commission does not think it has the technical basis for providing such instructions while the SC does not want to make such decisions as it may be seen that the SC makes political decisions. Therefore, this is best developed in a dialogue where the SC may present candidate criteria for implementation of a precautionary approach in different situations, the Commission may then consider these and provide new guidance or questions in this regard to SC.*

- The Commission should provide explicit guidance for the Scientific Committee on priorities for its advice. Consideration of such priorities might be facilitated through a modification of the structure of the Scientific Committee, such as more extensive use of focused expert groups working either by correspondence or at meetings. *2016 Review Panel comment: The need for prioritisation is addressed under the recommendations regarding stock status and ecosystem approach above.*
- The structure of the Scientific Committee report and the readership of the various scientific reports should be analysed and the reports be redesigned to be fit for purpose taking the following considerations into account.

**2016 Review Panel comment:** The SC has dismantled its subcommittee, the SSC, so the recommendations below regarding the division between the SC and the SSC reports are not directly relevant anymore. However, there is a point that there are two target readerships for the Stock status reports (peer scientists and the Commission respectively) which have very different requirements to what they need to get from the report. The division of tasks between the scientists and the Commission as well as the clarity of information would be improved these two requirements were addressed separately. It may be unnecessarily cumbersome to make two separate reports for these two readerships, but one could alternatively think of having information and recommendations targeting the Commission presented in a separate section of the report for the Commission while the technical rationale for that is then presented in detail in another section. The dialogue between the SC and the Commission, feed back to the SC and understanding of SC recommendations and relevant implications of Commission decisions regarding conservation and harvesting policy benefits from a presentation of the SC recommendations to the Commission and discussion on that basis prior to deliberations in the Commission.

- a. The Scientific Committee report should be an advisory report, with the Commission and highly interested stakeholders as its primary readership. It



should include a summary of the scientific information that underpins the advice.

**2016 Review Panel comment:** See suggestion above, this would be equivalent to the section of the SC report targeting the Commission.

- b. The SSC report should present the technical assessments that form the basis for the deliberations by the Scientific Committee. The readership of that report is the Scientific Committee and the wider science community. *2016 Review Panel comment: See suggestion above, this would be equivalent to the section of the SC report including the technical background for the recommendations*
- c. There should be similar technical reports available as background analysis for other topics that require review by the Scientific Committee.

**2016 Review Panel comment:** The RP agrees that any other analysis reviewed by the SC should be available as a technical report and be transparently available.

- d. The Secretariat should create a series of working papers, or research documents, which should be coded and a copy kept for future reference. Papers that are not properly coded may be discarded after the meeting. *2016 Review Panel comment: This is largely instigated as any papers that are referenced or used in the SC report is kept.*
- The roles and functions of the Scientific Committee and SSC should be clarified, duplication of work avoided and decision-making clarified as described in section 4.3.1.  
*2016 Review Panel comment: this is not relevant anymore as the SSC is dissolved*
  - A review should be undertaken to explore arrangements for giving the Secretariat the responsibility to compile data and produce working papers for the Scientific Committee and SSC, with a view to attaining a smooth workflow. The review should also identify the role of the coordinating scientists in this regard.  
*2016 Review Panel comment: The roles of the Secretariat and scientists have been clarified and the Secretariat serves the role described today.*
  - The Contracting Parties should support the scientific coordinators to allow efficient use of meeting time at the Scientific Committee.

*2016 Review Panel comment: This should always be a given. The RP is not aware of incidents where Contracting Parties have prevented scientists from contributing properly to work in the SC.*

## **Performance Review 2016 Recommendations**

- 7 The SC should modify its rules of procedure to include guidance on how to proceed in order for the SC to provide conclusions which are helpful to the Commission in cases where there may be different opinions of a scientific nature between scientists,
- 8 The basis for analysis and recommendations by SC, which has important economic, social or political implications for fisheries or member states, should be subject to independent peer review as is normal in science in order to provide trust in the integrity of the advice and recommendation in question. Peer review should apply regarding the scientific soundness of methods to be applied. In cases where a methodology is implemented repeatedly on updated data sets, such as a stock status which is using peer reviewed methodology on a data set which has just been updated with recent data, the SC should be in a position to internally review whether the prescribed methodology has been applied according to standards. Independence of peer reviewers can be judged on basis of the normal criteria used in science including that the reviewer or the organisation he or she is affiliated to should not have an interest in the matter under scrutiny and that there are no relations in terms of organisation, family or economy to any scientists involved in the analysis in the first place.
- 9 The RP recommends that rules of procedure are amended to ensure that scientists are not asked to have a double role in doing both scientific analysis and negotiating Commission decisions on the same matter. Members of the SC or scientists which have provided analysis serving as an input to the SC should never have double roles by also serving as negotiators or delegates to the Commission. Members of the SC may be available at Commission meetings as resource persons and may be asked by the Commission chair to explain SC analysis and recommendations, but they should never be called upon by national delegates of the Commission to substantiate a specific national viewpoint in the Commission.
- 10 The SC reports (including the Stock status reports) should contain a section which contains information and recommendations directed to the Commission in a language fit to inform operational decision making. Such information and recommendations should always be backed by sections which in a transparent way presents the technical background in a language fit for scientific peers.

### **4.1.5 Adoption of conservation and management measures**

SEAFO Contracting Parties have a mandate under article 3 of the Convention to adopt measures for living marine resources that ensure the long-term conservation and sustainable use of those resources and are based on the best scientific evidence available. Contracting Parties are also bound to apply the precautionary approach, take due account of the impact of fishing operations on ecologically related species and ensure that practices and measures take due account of the

**need to minimise harmful impacts on living marine resources as a whole and protect biodiversity in the marine environment.**

The Commission has taken a number of conservation and management measures. MCS measures, initially codified as separate Conservation Measures, have been integrated into the SEAFO System (most recent version 2015). The species specific measures include TACs for target species or former target species: Patagonian toothfish (*Dissostichus eleginoides*), Deep-Sea Red Crab (*Chaceon erythrae*), Orange roughy (*Hoplostethus atlanticus*), Alfonsino (*Beryx splendens*) and Pelagic armourhead (*Pseudopentaceros richardsoni*) (CM 31/15 TACs for 2016) and by-catch rules for sharks (CM 04/06), turtles (CM 14/09) and sea birds (CM 25/12). Habitat related measures have been adopted in relation to bottom fishing and VMEs (CM 30/15).

The Commission, following the advice of the Scientific Committee, has consistently applied a precautionary approach in the adoption of conservation and management measures. The advice from the SC has largely been followed.

The main areas of measures relate to:

- Closing of areas for all fishing and protocols for opening such areas for fishing
- A default closure of the CA for bottom fisheries and in this context opening of specific areas to allow bottom fishing and protocols to open such areas for fishing
- Setting annual TACs for target or former target species
- Measures to reduce bycatch of sharks, turtles and seabirds
- Requirements to report incidents of encounter of organisms associated with VMEs
- Move on rules in cases of such encounters

#### Panel Considerations

The conservation and management measures taken by the Commission are adequate in the present situation of low fisheries effort and only two stock targeted.

The present rules in place for expansion of existing fishing areas enables such expansion to take place in a responsible way.

The areas closed to all fisheries have been identified on basis of information which in some cases is not sufficiently specific to enable closures to clearly target potential VME areas. The

protocol for opening parts of these areas to fisheries which may have low impact is such that it in practice may be economically impossible to follow it.

The Commission may want to address some issues to refine these measures to prepare for a situation where there may be more interest for commercial fisheries in the area:

- To develop further the ecosystem approach as discussed above under that heading
- To take any moves possible to identify potential VME areas more precisely than is the case today, so that management measures regarding areas set aside to protect these can be more focused.
- To develop rules for exploratory fisheries further so that it becomes possible in practice to expand fisheries without putting the health of the ecosystem or stocks at risk.

### **Performance Review 2010 Panel Recommendations**

- Effort should be placed in collection of data and information in order to build up time series for usage in the assessment of the resources in the Convention Area.
- 2016 Review Panel comment: This has been implemented
  
- The Commission is encouraged to continue with the initiatives of collecting relevant data through scientific observers onboard fishing vessels as adopted through conservation measures since 2005.
- 2016 Review Panel comment: There is 100% observer coverage regarding scientific data collection
  
- The Commission should continue its policy that ensures that the fisheries should not be allowed to expand faster than acquisition of information necessary to provide a basis for sustainable utilization.
- 2016 Review Panel comment: This policy has been continued
  
- In the presence of a high level of uncertainty regarding stock dynamics in the Convention Area it is recommended that the Commission's major management approach continue to be based on precaution in order to avert potential risks linked with unsustainable resources exploitation, while accumulating sufficient and essential data and information for stock management. A suitable prototype for the SEAFO to use is the CCAMLR's new exploratory fisheries approach and regulatory framework as it was developed for a situation associated with large levels of uncertainty, incomplete knowledge of stock

potential and distribution, large geographical area from which data was to be collected under limited fishing.

- 2016 Review Panel comment: The Commission has instigated protocols for expansion of existing fisheries areas which requires data to be collected and only expanding on basis of information.
- The conservation and management measures should be supported by an effective implementation regime and a robust enforcement mechanism in order for them to have the desired effect. *2016 Review Panel comment: There are as yet no sanctions in place which undermines the implementation of management measures, this is discussed in section 4.2.4 below.*

## Performance Review 2016 Recommendations

- 11 The SC and the Commission to consider ways by which more precise information about potential VMEs can be obtained with a view to focus area closures to protect any potentially vulnerable areas.
- 12 The Commission to consider a revision of protocols for opening of areas closed to all fisheries in order to enable decisions to be made on basis of data which can realistically be collected without jeopardising the health of ecosystems and fish stocks.

#### 4.1.6 Capacity management

Since the establishment of SEAFO, the following fleets have been operating in the Convention Area:

- pole and line, longliners and purse seiners (tuna and tuna like species);
- longliners (toothfish);
- pot fisheries (red crab); and
- bottom and middle-water trawl fisheries (orange roughy, dory's and boarfish etc).

Tuna fleets are operating in the Area under ICCAT and IOTC management.

In 2015 only one trap fishing vessel and one long liner were operating under SEAFO measures.

#### Panel Considerations

With the reduction in fisheries and the adoption of the list of authorised vessels updated by CPC's following the last review there is no longer issues with capacity management for SEAFO managed fisheries.

#### Performance Review 2010 Panel Recommendations

- The Commission should establish rules that assure that the list of authorised vessels better reflects the actual capacity deployed in the Convention Area.

*2016 Review Panel comment: This has been done and is part of the SEAFO System requirements (Article 4) "Authorisation and Notification to fish", which requires each member to annually advise SEAFO or vessels authorised to fish in the convention area.*

#### Performance Review 2016 Recommendations

The RP has no further recommendations regarding Capacity Management

#### 4.2 Compliance and Enforcement

#### **4.2.1 Flag State Duties**

Article 14 of the SEAFO Convention sets out the general flag State responsibilities of the parties, drawing heavily on articles 18 and 19 of the UNFSA. In addition, according to Article 16 of the Convention a System of Observation, Inspections, Compliance and Enforcement (the System) was adopted by the Commission, notably to strengthen the effective exercise of the flag State duties.

Annual compliance reviews performed in the Compliance Committee also contribute to verify and ensure that Contracting Parties fulfil their flag State obligations.

#### **Panel Consideration**

The adoption of the SEAFO System in 2013, revised in 2015, and the annual compliance reviews performed by the Compliance Committee have significantly contributed to the verification and achievement of Contracting Parties obligations as flag States, including the reporting of fisheries data such as catch, effort, biological sampling data, observer reports, port inspection reports and VMS data.

#### **Performance Review 2016 Recommendations**

- 13 Given the positive results on compliance and the relatively reduced number of fishing vessels operating in the Convention area, the panel doesn't have any particular recommendation on flag State duties. However, if the number of active vessels in the Convention area sharply increases or if the general level of compliance within SEAFO worsens, the Commission should examine the possibility of developing new mechanisms within the System to facilitate flag States to ensure that their vessels comply with the principles of the Convention and conservation, management and control measures adopted by the Commission.**

#### **4.2.2 Port State Measures**

Article 15 of the SEAFO Convention reflects the duties of SEAFO Contracting Parties as port States. It incorporates article 23 of the UNFSA with the addition of reporting and information requirements if a vessel of a flag State Contracting Party is found by a Port State Contracting Party to have violated SEAFO measures.



The principles of the FAO Agreement on Port State Measures have been incorporated into the SEAFO regulatory framework, through Conservation and Management Measures that were lately developed and incorporated in the System of Observation, Inspections, Compliance and Enforcement. These measures apply to all vessels (not limited to foreign vessels) that have been engaged in fishing or fishing related activities in the Convention Area (with exceptions relating to container ships) seeking entry to Contracting Party's ports, within the coastal States, which have areas of national jurisdiction adjacent to the Convention Area. In practical terms, only the mentioned ports are used by vessels operating in SEAFO framework. Notwithstanding, two Contracting Parties without ports in areas adjacent to the SEAFO Convention Area haven't signed or ratified the FAO Agreement on Port State Measures but endeavour to apply SEAFO Port States measures in the very unlikely event that their Ports are used in SEAFO operations.

As at 30 August 33 parties have ratified or acceded to the FAO Agreement on Port State Measures and included in these 33 parties are the SEAFO members; EU, Norway, Korea, and South Africa along with the US and Iceland. Angola has signed but is yet to ratify the agreement. All SEAFO members should ratify or accede to this agreement. .

### **Panel Consideration**

The Compliance Committee has concluded that Port State control obligations are currently fulfilled. However, the Compliance Committee highlighted that inspection reports concerning vessels landing catches from the SEAFO Convention Area should always be made available, in due time, to the Committee in accordance to the System's obligations.

### **Performance Review 2016 Recommendations**

**14 The Panel recommends that inspection reports should always be made available in due time to the Secretariat.**

**15 The Commission should examine the opportunity to create and implement follow-up mechanisms on Port State infringements.**

#### **4.2.3 Monitoring, Control and Surveillance (MCS)**

The System of Observation, Inspections, Compliance and Enforcement fully integrates MCS measures in SEAFO legislation.

## **Panel Consideration**

The System of Observation, Inspections, Compliance and Enforcement is a living and evolving document that could be updated or amended whenever necessary to incorporate new requirements aiming the improvement of the level of compliance or incorporate missing provisions according to the Convention or other international fishing management legislation.

Consistent with Article 14 (3) (g) of the Convention, measures to permit access by observers, with compliance purposes, from other Contracting Parties to carry out functions as agreed by the Commission should be developed by flag States. These measures could be examined by the Commission and, if necessary, be integrated in the System in order to facilitate the implementation of flag State duties and contribute to the improvement of the SEAFO compliance outcome.

The Commission considered that the inspection programme at sea envisaged in Article 16 (3) (b) of the Convention is realistically integrated in the System, notably taking into account costs involved, the relatively low fishing activities in the SEAFO Convention area and the completeness of the MCS provisions of the System.

Despite the adoption of the System, it remains to be established a dedicated observer programme with compliance purposes consistent with the provisions of the Article 16 (3) (c) of the Convention. In this context, the Commission could evaluate and precise the opportunity/need to implement such observer programme, notably taking into account its viability and necessity to address compliance shortcomings. Notwithstanding, the panel considered that given the relatively low fishing activities in the SEAFO Convention Area and the MCS provisions of the System, notably concerning Port State Measures, scientific observer programme, VMS monitoring and possible board inspection at sea, the implementation of such programme seems, at this stage, not worthwhile.

The System currently does not include a section for gear configuration and this could be useful. Guidance on gear configuration could lead if necessary to development of Conservation and Management Measures on gear configuration.

## **Performance Review 2016 Recommendations**

- 16 SEAFO should continue examining the usefulness of implementing a comprehensive observer programme, with compliance purposes, as set out in Article 16(3)(c) of the Convention. This analysis should take into account the viability of implementing such a programme and its necessity in order to further address compliance shortcomings and also the potential conflict with compliance and scientific observing.
  
- 17 The Commission could also evaluate the opportunity to integrate in the System, measures to permit access by observers, with compliance purposes, from other Contracting Parties to carry out functions as agreed by the Commission.
  
- 18 If the fishing activity in the Convention Area sharply increases, the Commission should also examine the possibility to develop within the Compliance Committee an annual country by country compliance review complementary to the annual Compliance Committee compliance performance review undertaken on the basis of measure by measure assessments.
  
- 19 Consideration could be given to including in the System guidance an illustrated description of fishing methods and gears used in SEAFO and this would make the guide more complete. This could lead to if necessary the development of conservation and Management Measures for gear configuration and for mesh and hook size and/or numbers.

#### **4.2.4. Follow-up on Infringements**

As noted in the first Performance Review, pursuant to article 13(4) of the Convention, each Contracting Party must transmit to the Commission an annual statement of compliance measures it has implemented, including a scheme of incentives and/or the imposition of sanctions for any violation. Furthermore, article 14(3)(a) requires flag States to take measures to ensure that they investigate immediately and report fully on actions taken in response to an alleged violation by a vessel flying its flag.

Procedures for follow-up on infringements detected under a system of observation, inspection, compliance and enforcement that includes standards of investigation, reporting procedures, notification of proceedings, incentives and/or sanctions and other enforcement actions, pursuant to Article 16 (3)(d) of the Convention have yet to be developed.

Furthermore, the functions of the Compliance Committee, unless otherwise decided by the Commission, are to provide the Commission with information, advice and recommendations

on the implementation of, and compliance with, conservation and management measures. These functions are elaborated in the Committee's terms of reference in article 9 of the Convention, but do not include any additional guidance on how to follow up on infringements.

### **Panel Consideration**

Although the SEAFO Convention contains obligations for its Contracting Parties to follow up alleged infringements there is still no procedure in place to follow-up detected infringements.

The description of duties could include providing the date of submission of the report of infringements and requiring the report to contain an indication of the current status of the case (e.g. case pending, under appeal, still under investigation). Any incentives, sanctions or penalties imposed should be described in specific terms (e.g. incentive/remedial measures, level of fines, value of forfeited fish and/or gear, written warning) and should include an explanation if no action has been taken.

### **Performance Review 2016 Recommendations**

- 20 SEAFO should develop more detailed procedures and requirements for follow-up on detected infringements through the application of the System and the annual compliance review performed by the Compliance Committee and endorsed by the Commission in accordance with Article 16 (3) (d) of the Convention.**

#### **4.2.5 Cooperative mechanisms to detect and deter non-compliance**

As noted in the first Performance Review, SEAFO Contracting Parties are to adopt measures in respect of vessels flying their flag that permit access by observers from other Contracting Parties to carry out functions as agreed by the Commission, pursuant to article 14(3)(g) of the Convention. The Panel is not aware of any Contracting Party that has implemented this provision.

According to article 16(3)(c) of the Convention the Commission established a System for observation, inspection, compliance and enforcement. However, an observer programme

with arrangements for placing observers by a Contracting Party on vessels flying the flag of another Contracting Party with the latter's consent is not yet included in the System.

Article 22 of the SEAFO Convention addresses non-parties and contains obligations and options for Contracting Parties to deter non-compliance by non-parties, including the exchange of information between Contracting Parties and with other RFMOs as well as to take measures to deter activities which undermine the effectiveness of conservation and management measures adopted by the Commission. However, according to available information there are no fishing activities by Non-Parties of SEAFO in the Convention Area.

Also noted by the first Performance Review, RFMOs have established specific schemes designed to combat IUU fishing, which include the listing of vessels found to be involved in such activities within the relevant RFMO's area of competence, so-called negative lists. The schemes set out procedures for the establishment and maintenance of lists of fishing vessels found to have engaged in fishing activities in a manner that has diminished the effectiveness of conservation measures.

SEAFO has such a scheme in place that is included in the System, on establishing a list of vessels presumed to have carried out IUU fishing activities. The scheme sets out activities that should be taken into account when a vessel is considered for the inclusion on a list, procedures for listing and de-listing, measures to be taken against listed vessels as well as recognition of IUU vessel lists established by CCAMLR, NAFO and NEAFC. It should be noted that NAFO, NEAFC and CCAMLR recognise the SEAFO IUU Vessel List, available on the SEAFO website.

Furthermore, Port State Measures, of Chapter II of the System allowing or denying the entry and the use of Contracting Parties' ports within the coastal States, which have areas of national jurisdiction adjacent to the Convention Area are already in force. In this context, advance notification must be required before access to port is granted. Based on the notification as well as other information it may require to determine whether the vessel has engaged in IUU fishing, the port State shall decide whether to authorise or to deny entry into its port. A port State shall, however, deny access if it has sufficient proof that a vessel has engaged in IUU fishing, and in this regard in particular if the vessel is on an IUU vessel list established by an RFMO.

SEAFO Contracting Parties are further obliged to report on any sighting of fishing vessels flying the flag of a non-Contracting Party operating in the Convention Area, cf. Chapter VII of the System

### **Panel Consideration**

The panel reiterates that SEAFO has in place adequate mechanisms for detecting and deterring IUU fishing. These mechanisms could, however, be further improved in the future by taking on board, on a regular basis, innovation worldwide recognised global initiatives to fight IUU fishing.

Currently the fishing activities in the Convention Area are notably monitored by reporting requirements, Port State Measures, scientific observer programme, VMS monitoring.

### **Performance Review 2016 Recommendations**

- 21 The Commission should examine the opportunity to develop and adopt measures for observation to give effect to Article 14(3)(g) (give access of observers, with compliance purposes, from other Contracting Parties) and article 16(3)(c) (observer programme with compliance purposes) of the SEAFO Convention.
- 22 SEAFO should consider amending the article 28 of the System in order to recognise IUU vessel lists of all relevant RFMOs, notably SIOFA.

#### **4.2.6 Market Related Measures**

As highlighted in the first Performance Review, the Commission discussed the possible introduction of a Catch Documentation Scheme (CDS) for *Dissostichus* spp (Patagonian toothfish) in a SEAFO context, similar to that established by CCAMLR. This CDS is designed to track the landings and trade flows of Patagonian toothfish, and to restrict access to markets for toothfish from IUU fishing. This enables the CCAMLR to identify the origin of toothfish entering the markets of all parties to the scheme, and helps determine whether the fish are caught in a manner consistent with CCAMLR's measures.

This system requires specific control by port States. A fishing vessel must provide a prior notification, including a declaration that they have not been engaged in IUU fishing, which also must be confirmed by the flag State of the vessel. Fishing vessels failing to make such

a declaration shall be denied port access. If there is evidence that the vessel has fished in contravention of CCAMLR conservation measures, the catch shall not be allowed to be landed or transhipped.

Mindful that all SEAFO Contracting Parties, except for Angola, are also Contracting Parties of CCAMLR, the SEAFO Commission noted that for those Contracting Parties there is no need for a specific SEAFO scheme. The Commission encouraged Angola to cooperate with CCAMLR if Patagonian toothfish are landed in its ports or enter its market.

### **Panel Consideration**

The Panel highlights once again the Commission's discussion in 2009 concerning CDS, and confirms that there seems to be no need currently to establish specific marked related measures for species managed by SEAFO. However, if fishing activities sharply increase in SEAFO Convention Area, the Commission could examine the need to implement market related measures.

### **Performance Review 2016 Recommendations**

- 23** If fishing activities sharply increase in SEAFO, the Commission should evaluate the need and consider the prospect to develop a Catch Documentation Scheme for relevant species in harmony to CDSs already in force in other RFMOs. In this context the Commission should closely follow the ongoing FAO works on Catch Documentation Scheme.

## **4.3 Decision-making and dispute settlement**

### **4.3.1 Decision-making (Articles 17 and 23)**

Article 17 of the Convention describes the decision making framework for the Commission. Article 17 requires decisions of the Commission on matters of substance to be taken by consensus of the Contracting Parties present, and other decisions by simple majority.

Article 23 describes the process where conservation and management and control measures become binding within sixty days. It also elaborates an opting out procedure requiring the Contracting Party that does not wish to be bound by the measure to notify the

Commission that it is unable to accept the measure, its reasons and proposals for alternative measures which it will implement. Where this happens, any Contracting Party may request a meeting of the Commission to review the measure, and Contracting Parties have the right to declare that they are no longer bound by the measures within thirty days following such meeting. Pending the outcomes of the meeting, any Contracting Party may request an *ad hoc* expert panel to be convened to recommend interim measures which are binding in specified circumstances.

The Rules of Procedure for the Scientific Committee, Compliance Committee and the Committee on Administration and Finance clearly and comprehensively elaborate decision-making procedures for those subsidiary bodies. These rules were reviewed following a recommendation from 1RP.

### **Panel Consideration**

The 1<sup>st</sup> Review recommended that the Commission undertake a review of the Scientific Committee Rules of Procedure in respect of the establishment of subsidiary bodies and decision-making for the generation and update of data, assessments and analyses. This review was undertaken and one useful outcome was to amalgamate the Sub-committee and the Committee on Science as the subcommittee was redundant.

The Scientific Committee is a science process and should be attended by scientists who can fairly advise the Commission on issues of science, ecology and stock assessment. The Science Committee must be free from political interference and if managers who are not contributing scientists attend the SC they should attend as observers on their delegations and not as the delegate. The review panel has made recommendations under Section 4.1 above to further strengthen the science process.

The Panel noted that the Commission continues to function relatively smoothly under consensus decision-making for conservation and management and control measures, and Article 23 has not been invoked. While a consensus approach to decision-making may effectively weaken the final outcome in some cases, this has not been apparent in SEAFO practice.



The Review Panels only concern is that to date the Commission has not taken measures to determine and agree by consensus what decisions require a decision by consensus and those which can be taken by a simple majority.

### **Performance Review 2016 Recommendations**

**24 The Commission should review Article 17 utilising as a guide the WCPFC Rules of procedure Rules 21-30 (Annex 2) and determine what issues must be decided by consensus and those that can be taken by a simple majority.**

**25 Once this is decided the Commission should also agree to a voting procedure.**

**26 The Commission should ensure the SC process stays free from political influence.**

#### **4.3.2 Dispute settlement**

A compulsory dispute settlement process is described in article 24 of the Convention which generally incorporates requirements of articles 28, 29 and 30 of the UNFSA. It obliges the Contracting Parties to cooperate to prevent disputes as a first step, then to consult with a view to resolving the dispute. It establishes a process relating to technical disputes, which are to be referred to an *ad hoc* expert panel to be established in accordance with procedures adopted by the Commission at its first meeting. Where a dispute has not been resolved within a reasonable time, it must be submitted for binding decision at the request of any Contracting Party in accordance with Part XV of the 1982 Convention or, for disputes relating to straddling stocks, Part VIII of the 1995 Agreement, whether or not the parties to the dispute are parties to those instruments.

Between 2011 and 2016 there have been no disputes between Contracting Parties of SEAFO.

### **Panel Consideration**

The 1<sup>st</sup> RP recommended that procedures be developed to establish a dispute panel if a dispute arises. This work was undertaken by SEAFO and is described in the SEAFO document on Dispute Settlement.

The dispute resolution process adequately meets the requirements of SEAFO.

## **Performance Review 2016 Recommendations**

No recommendations are made or deemed necessary.

### **4.4 International Cooperation**

#### **4.4.1 Transparency**

Transparency is a hallmark of the organisation and it has good practices in place to ensure representation at its meetings. There are the Annual meetings of the Commission and of the Science, Compliance and the Finance committees. All of these Committees have nominated chairs and all are supported with documentation from members and the Secretariat. The Commission has a very good website and the papers and reports of meetings are readily available to observers and members alike.

Part VI of the Rules of Procedure (Rules 33-38) governs the attendance of observers at meetings and these rules are clear and transparent. They provide that observers may be invited to attend meetings of the Commission from signatories of the Convention, non-Contracting Parties, FAO and inter-governmental organisations. (Rule 33 (a) and (b)) Non-governmental organisations may also be invited unless the majority of Contracting Parties object. (Rule 33(c)) Where Contracting Parties had not considered inviting an observer for its next meeting, the Executive Secretary may draw the Contracting Parties' attention to his view that the work would be facilitated at the meeting by the attendance of an observer and a decision may be taken in accordance with the Rules. (Rule 34)

The Rules regarding attendance at public and private sessions of the Commission are clear and open, allowing attendance unless otherwise restricted by Contracting Parties. (Rule 35) The Chair may invite observers to address the Commission unless there is an objection (Rule 36) and the submission of information documents to Contracting Parties on matters under consideration in the Commission is permitted. Observers must be granted timely

access to documents subject to confidentiality rules of the Commission, and a clear process for the issuance of invitations to observers is provided in Rule 38. Since 2015, the Compliance report is now available on the Commission website.

### **Panel Consideration**

The Panel noted that there were no recommendations on transparency from the last meeting and notes that the Secretariat continues to improve the website and ensures that papers are available in a timely manner.

### **Performance Review 2016 Recommendations**

The panel made no recommendations and was encouraged by the professionalism and commitment of SEAFO to transparency and openness.

#### **4.4.2 Relationship to non-Contracting Parties cooperating with SEAFO**

As noted in the first RR, cooperation with non-parties is governed by Article 22 of the Convention, which generally implements Part V of the UNFSA. It generally obliges the Contracting Parties to request non-parties whose vessels fish in the Convention Area to cooperate fully with the Organisation either by becoming party to or by agreeing to apply the conservation and management measures. It encourages the exchange of information and take measures to deter fishing activities by fishing vessels of non-parties which undermine the effectiveness of the Commission's conservation and management measures. The Commission is empowered to invite non-parties to send observers to its meetings, or to the meetings of any subsidiary bodies of the Organisation.

Some States that participated in the negotiations to establish SEAFO have not become Contracting Parties of the Organisation. They are States that have signed the Convention but not taken further steps to ratify it, notably the coastal State of the United Kingdom, as well as Iceland and the United States.

Since the last review the Republic of Korea has acceded to the SEAFO Convention and is a full and participating member. Japan joined the Commission in 2010. The United Kingdom

is the outstanding non-member and parties should continue to lobby UK on behalf of St Helena and its Territories to join SEAFO. The recent decision by the UK to leave the EU may facilitate a rethink by the UK of its attendance in global RFMO meetings.

### **Panel Consideration**

Following recommendations and action by the Commission Korea is now a member of the Commission. The United States and Iceland remain interested observers. The one party who has territories with coastal waters in this convention area is the United Kingdom and although they are not fishing and the fishing industries of the territories are with the EEZs (lobster) they are a coastal state to this Convention area.

### **Panel Recommendations**

- 27 The Commission should as a priority continue its efforts to encourage the United Kingdom on behalf of St Helena and its Territories to complete the ratification process to become a Contracting Party to the Convention. Particular emphasis should be put on the fact that St Helena and her Territories are coastal states and have waters adjacent to the waters of SEAFO and as such have responsibilities to cooperate under UNCLOS. (Articles 116-119 UNCLOS).

#### **4.4.3 Relationship to non-cooperating non-Contracting Parties**

Since 2011 SEAFO through its Compliance Committee has continued to monitor vessels for IUU activity and has encouraged vessels operating in the area to report any suspicious activity. SEAFO continues to have its IUU vessels listed as IUU with CCAMLR, NAFO and NEAFC and incorporates vessels listed from these organisations on the SEAFO list of IUU vessels. Discussion with the Secretariat and the 2<sup>nd</sup>RT suggests that the SEAFO should investigate complimentary listing IUU vessels with SIOFA once that organisation has been established. The SEAFO IUU vessel list is on the SEAFO webpage.

Many fishing vessels in the Convention Area are fishing for species that are not under the SEAFO mandate (mainly ICCAT and IOTC). These vessels are monitored by ICCAT and IOTC.

### **Panel Consideration**

As noted previously, fishing by vessels from non-cooperating non-Contracting Parties in the Convention Area is not to be a major problem. Where it occurs, the Secretariat takes action as directed by the Commission, and the IUU vessel list effectively serves as a deterrent to vessels seeking to undermine conservation and management measures. A stronger relationship between the compliance staff of ICCAT, IOTC, and CCSBT with SEAFO should be encouraged as sharing information on suspect vessels and activities may be useful.

#### **Performance Review 2016 Recommendation**

**28 SEAFO should continue to monitor any future fishing activities by vessels from non-cooperating non-Contracting Parties in the Convention Area that may take place, and take action as appropriate.**

**29 SEAFO Secretariat should move to establish relationships between compliance staff in ICCAT, IOTC and CCSBT.**

#### **4.4.4 Cooperation with other international organisations**

As noted, SEAFO is mandated by Article 18 of the Convention to cooperate, as appropriate, with the FAO and with other specialized agencies and organisations on matters of mutual interest. It must also seek to develop cooperative working relationships with other inter-governmental organisations which can contribute to their work and the Commission is empowered to enter into agreements with these other organisations

The Commission cooperates with international and regional organisations in a structured and methodical manner. The agenda for Commission meetings continues to routinely contain an item relating to such cooperation, where Contracting Parties are nominated to represent SEAFO at the upcoming meetings of regional or international organisations and those previously nominated report on the meetings attended during the preceding year. This is an economical and practical approach, and takes into account the human and budgetary constraints that do not allow the Secretariat to attend all such meetings. Cooperation has occurred in recent years with the following organisations:

Meetings, workshops at FAO and the UN including the Regional Fishery Body Secretariats Network meeting facilitated by the FAO at COFI and also meetings of other appropriate RFMOs/RFB including CCAMLR, ICCAT, NAFO, NEAFC, NAMMCO, and the Benguela Current Commission (BCC).

Since the last review cooperation between the SEAFO Secretariat, the BCC and Namibian Ministry of Fisheries has continued to strengthen with the organisations now co-located in a building in Swakopmund. BCC sends observers to SEAFO Commission meetings and SEAFO continues to attend the BCC Management Board as an observer. Once SIOFA is fully established it may be useful for SEAFO to establish good links to that organisation.

In addition, there is ongoing communication and cooperation with relevant RFBs through exchanging information on VMS reports, fishing activities and lists of IUU and authorized fishing vessels.

The SEAFO webpage shows links to a number of important organisations: FAO, the Pacific Islands Forum Fisheries Agency (FFA), CCAMLR, ICCAT, NEAFC, NAFO, the North Atlantic Marine Mammal Commission (NAMMCO) and the North Atlantic Salmon Conservation Organization (NASCO).

There are no formal Memoranda of Understanding or agreements between SEAFO and other organisations and the panel see no need for such arrangements.

### **Panel Consideration**

**The current process of liaison with other international and regional organisations and the information on any outcomes is adequate. SEAFO liaises well with other appropriate organisations and is encouraged to continue with its current approach. This negates the need for any formal MoU type arrangements.**

The 1<sup>st</sup> RR recommended that the Secretariat should update the linkages site on the SEAFO webpage to reflect important areas of cooperation with other organisations (such as the sharing of IUU vessel lists and the cooperation with BCC) and to ensure that the list is complete and reflects all organisations with which SEAFO cooperates or which are important to its work. This work has now been completed and the information reflected on the SEAFO website.

### **Performance Review 2016 Recommendations**

**There are no recommendations on this issue.**

#### **4.4.5 Special requirements of developing States**

Special requirements of developing States have been addressed by SEAFO in its Convention, and SEAFO continues to secure funding through the UN Special Assistance Fund. SEAFO has a Special Requirements Fund and this fund receives voluntary contributions and the funds are mainly utilized for capacity building for developing state delegates. There are two main types of voluntary contributions, contributions from Norway to the Special Requirements Fund and specific project funds from the EU. All of these funds are banked in the Commission accounts and managed in accordance with established procedures by the Secretariat.

Article 21 of the SEAFO Convention addresses the recognition of the special requirements of developing States in the region. It requires Contracting Parties to give full recognition to the special requirements of developing States in the region in relation to conservation and management of fishery resources and the development of such resources, and has comprehensive provisions based generally on Articles 24 and 25 of the UNFSA.

In particular, Article 21(4) provides that cooperation with developing States in the region is to include the provision of financial assistance, assistance relating to human resources development, technical assistance, transfer of technology, and activities directed specifically towards:

- improved conservation and management of the fishery resources covered by this Convention through collection, reporting, verification, exchange and analysis of fisheries data and related information;
- stock assessment and scientific research; and
- MCS, compliance and enforcement, including training and capacity-building at the local level, development and funding of national and regional observer programmes and access to technology and equipment.

Guidelines and operational procedures for the fund have been developed and agreed as well as criteria for selection and evaluation by the Secretariat.

#### **Panel Consideration**

The Review Panel considers that SEAFO has addressed the issues relating to the special requirements of developing States in a realistic and proactive manner that meets the objectives and requirements of the Convention, as well as the practical needs of developing State Contracting Parties to ensure their active participation in and support of the work of SEAFO. SEAFO acts both as catalyst to encourage its Contracting Parties to apply for available support from other sources, and as a source for supporting specified activities with or without the Fund. The principles, guidelines and operational procedures for the Fund are comprehensive and well-constructed.

## **Performance Review 2016 Recommendations**

- 30 The Panel encourages further contributions to be made to the Special Requirements Fund or by any other means.**

### **4.5 Financial and Administrative Issues**

In this section the Review Panel considered a number of issues including; finance and general administration, staff conditions of service and regulations. The review Panel considered that the finance and general administration practices are in good shape however, staff salaries and conditions of the panel believes are worthy of serious consideration and appropriate action by Commission members.

#### **4.5.1 Finance and Administration issues**

SEAFO has very sound and transparent financial regulations and has adopted very good financial management processes and budgeting systems with the correct checks and balances to avoid any internal fraud. The SEAFO Financial Regulations governs the financial administration of the Commission by the Secretariat and members. The accounting system has been developed on Excel spread sheets and is suitable for managing the budget of SEAFO. The Secretariat prepares annually the draft budget accompanied by projections for the ensuing financial year and submits these 60 days prior to the meeting. The draft budget is accompanied by details both of the appropriations made for the previous



year and estimated expenditure against those appropriations, together with such information as may be required by Contracting Parties of the Commission or deemed necessary or desirable by the Executive Secretary.

At each annual meeting, the Standing Committee on Administration and Finance scrutinizes the draft budget prepared by the Secretariat and then prepares the final budget proposals to the Commission. The Commission then adopts the budget by consensus. The review panel notes:

- The Secretariat still produces paper reports and meeting papers and the Review Panel is of the opinion that it is more cost effective to move all the Commission papers and records to electronic copies and means. To facilitate this change, meeting papers should be reduced to documents ensuring clear and smooth progress of the meetings.
- The Commission should consider its meeting structure and it may be more effective for the meeting to commence on Tuesday with the Finance and Administration meeting and Compliance meetings held on Monday. In this way once the meeting starts it has all the information and recommendations it needs to deal with the decisions it has to take.
- Given the nature and size of this small RFMO it is essential that no party to the Convention ever gets into arrears with their payments as it will seriously compromise the ability of the Commission to do its work and to pay its staff. The Commission should consider establishing an operational reserve in the order of one third of the annual budget of the Commission so that the Commission can continue to operate and not become insolvent.
- The Secretariat provides the rapporteur for the meeting. The meeting record is not a complex record and it may help if the Commission moves to have the record of the meeting finalised before the meeting ends. If this is not possible, then it would help if the Commission established a timeframe and process for the early comment and clearance of the record. It is suggested that a process that saw the Chair having 2 weeks to clear the draft, the members having 6 weeks to comment, and the Secretariat then has a month to finalise the report may work for SEAFO.

- In terms of general administration, the Panel believes that the Secretariat should institute a process of numbering its Circulars and sending these more formally to members. This approach provides a reference for members who can check and make sure they have received all correspondence from the Secretariat.
- The review panel noted that if fishing does not increase in volume at some stage the Commission might consider reviewing its mandate and evaluate if it may be appropriate for consideration to be given to using the existing SEAFO as the base for a broader Atlantic Commission for non-tuna stocks.

### **Panel Consideration**

All expenditure and financial processes of SEAFO are audited annual by external auditors and to date the Audit reports have been clean with no qualifications noted. The general administration processes in SEAFO are sound.

### **Performance Review 2016 Recommendation**

- 31 That the Secretariat institutes a process of using numbered Circulars when communicating with members to ensure a more formal process of communication
- 32 All correspondence and meeting papers reports be sent and stored electronically
- 33 The Commission considers changing the schedule for its annual meetings to begin on Tuesday with Finance and Administration and Compliance meetings held on Monday.
- 34 The Commission either finalises the report of the annual meeting at the meeting or develops a process and timeframe for clearing meeting reports
- 35 The Commission considers establishing an operational reserve fund
- 36 When appropriate SEAFO considers extending its mandate to cover non tuna fisheries in the broader Atlantic.

#### **4.5.2 Staff Regulations and staff remuneration**

*(Please note: In raising issues of staff salaries and conditions of service these are the Review panel's views and thoughts on the subject. The staff are very supportive of SEAFO*

*and to a fair degree accepting of the situation. However, it is the panels clear view these regulations and conditions need urgent review and attention.)*

It should not be lost on the Members of this Commission that it was not the Secretariat who started the Commission but the members. The staff are international civil servants and were recruited later to serve the Commission members. Staff recruited to work in SEAFO Secretariat has a right to have an expectation that they will to the degree possible enjoy the salaries and conditions of service provided to Secretariat staff in other RFMOs and International Civil Service Organisations.

As with most international organisations there is a mix of developed and developing country members and while the developed country members may feel that the salaries offered to the Professional staff is fair compensation, the developing country members may find it difficult to accept as the salaries can be far higher than in their country and can be far higher than in the country where the organisation is based. This is however, the nature of these organisations and the professional positions are competitive international civil service positions and to attract and retain good staff the salaries and conditions offered must be at parity with other international organisations.

The benefits and conditions that normally apply to staff in an RFMO include:

- Professional salaries in line with the FAO salaries for comparable positions paid in US dollars and adjust annually to cost of living.
- Local staff salaries based on local government equivalents and adjusted annually for cost of living.
- Salary scales for both local and professional staff.
- Superannuation of pension contributions
- Tax free status
- Medical/Insurance coverage for staff and family including in remote regional medical evacuation coverage
- Arrival and departure allowances
- Rent allowances
- Reunion airfares
- Education allowances; and if appropriate
- Cost of living adjustment

It is not to suggest that all of these allowances need to be made available; but to point out to members what is generally considered appropriate even in smaller international organisations such as SEAFO.

There are however, some real omissions in the SEAFO arrangements that the review panel believes that members should move urgently to address.

Currently the situation in SEAFO is as follows:

- A salary point for the Executive Secretary that does not reflect the requirements of the position. For real comparison look at the SIOFA a similar organisation where the Executive Secretary position will be advertised at a P5 equivalent and not the base P2 offered in SEAFO.
- There is no pay scale for Professional or domestic staff. The local staff member has been on the same salary since commencement 9 years ago.
- Salaries are made in Namibian dollars and the Namibian dollar has fallen from 8 ND to the US dollar to 15 ND to the US dollar in the last 5 years. As such the salaries do not retain parity and purchasing power and significant reduction in real salary, notably for foreign members of the staff.
- Staff have to take out private health/medical and travel insurance
- There is no pension/superannuation allowance
- There is no education allowance and
- There is not rent assistance.

### **Panel Consideration**

While the panel accepts that it may not be possible for the commission to address all these issues some of these will need to be addressed urgently if the Commission is to replace the ES that it has with one of similar experience and quality.

### **Performance Review 2016 Recommendations**

- 37 The panel recommends that SEAFO immediately reviews the staff regulations including the salaries and conditions of staff to ensure that they are in line with the**

**most recent and modern RFMOs, including those regulations being developed for SIOFA.**

- 38 Salaries should be calculated in US dollars converted monthly to Namibian dollars for payment. For current professional staff their salaries must be adjusted back to parity for when they joined the organisation. Whether SEAFO considers payment of arrears is up to the Commission but staff of any international organisation should not be put in a position where they lose 50% of the actual value of their salaries due to currency fluctuations.
- 39 The classification of the ES position be immediately reviewed and upgraded to a P5 equivalent.
- 40 The Chair each year undertakes a formal review of the ES performance against an agreed criteria so that the salary for the ES can be progressed through pay points
- 41 The ES conducts performance reviews for the staff for the same purpose.
- 42 The Commission adopts salary scales for all staff positions
- 43 The Commission either pays or contributes significantly to the cost of medical/ health and travel insurance.
- 44 The Commission reviews and considers the other potential allowances and conditions listed above.

### **Headquarters agreement**

The Headquarters Agreement was signed during September 2009 by the Hon. Minister of Fisheries and Marine Resources of Namibia and the Chairperson of SEAFO. The Headquarters agreement is similar to other Headquarters agreements for RFMOs and grants the appropriate privileges and immunities necessary for the Commission to operate safely and professionally in Namibia.

## 5. A COMPENDIUM OF THE PANEL RECOMMENDATIONS

<b>SCIENCE CONSERVATION AND MANAGEMENT</b>
<p><b>Status of living marine resources</b></p> <ol style="list-style-type: none"> <li>1. The SC should continue its work on updating the Stock Status reports for stocks targeted by fisheries or where there may be future commercial interest, with an emphasis on the species specific information as required for the Commission to fulfil its role as responsible for fisheries harvesting target species sustainably in the convention area.</li> <li>2. For those potential target species where there are no current fisheries this could be based on a risk assessment rather than attempting to move to a full-fledged stock assessment in a situation where no data are available from non-existing fisheries.</li> </ol>
<p><b>Ecosystem approach</b></p> <ol style="list-style-type: none"> <li>3. The SC should develop Ecosystem status reports regarding the interactions between fisheries and the marine ecosystem within the convention area. This could be one for the convention area or a set of reports for different subsystems within the area. The Ecosystem status report(s) should provide information and scientific advice as required by the Commission to fulfil its role in relation to ensuring that fisheries impacts on the marine ecosystem are acceptable. In order to use available resources efficiently on this task a risk based assessment, as discussed in the context of fish species, could be extended to fisheries and also include the wider ecosystem effects of fisheries.</li> <li>4. The Commission should identify criteria for maximum acceptable ecosystem impacts of fisheries in relation to inter alia habitat impacts and incidental bycatch.</li> <li>5. In order to initiate this process, the Commission should request the SC to consider candidates for maximum acceptable impact which are relevant, measurable and can be monitored.</li> <li>6. Means to provide better data to indicate potential VME areas should be investigated</li> </ol>
<p><b>Data collection and sharing</b></p> <ol style="list-style-type: none"> <li>1. No recommendations</li> </ol>
<p><b>Quality and provision of scientific advice</b></p>

7. The SC should modify its rules of procedure to include guidance on how to proceed in order for the SC to provide conclusions which are helpful to the Commission in cases where there may be different opinions of a scientific nature between scientists,
8. The basis for analysis and recommendations by SC, which has important economic, social or political implications for fisheries or member states, should be subject to independent peer review as is normal in science in order to provide trust in the integrity of the advice and recommendation in question. Peer review should apply regarding the scientific soundness of methods to be applied. In cases where a methodology is implemented repeatedly on updated data sets, such as a stock status which is using peer reviewed methodology on a data set which has just been updated with recent data, the SC should be in a position to internally review whether the prescribed methodology has been applied according to standards. Independence of peer reviewers can be judged on basis of the normal criteria used in science including that the reviewer or the organisation he or she is affiliated to should not have an interest in the matter under scrutiny and that there are no relations in terms of organisation, family or economy to any scientists involved in the analysis in the first place.
9. The RP recommends that rules of procedure are amended to ensure that scientists are not asked to have a double role in doing both scientific analysis and negotiating Commission decisions on the same matter. Members of the SC or scientists which have provided analysis serving as an input to the SC should never have double roles by also serving as negotiators or delegates to the Commission. Members of the SC may be available at Commission meetings as resource persons and may be asked by the Commission chair to explain SC analysis and recommendations, but they should never be called upon by national delegates of the Commission to substantiate a specific national viewpoint in the Commission.
10. The SC reports (including the Stock status reports) should contain a section which contains information and recommendations directed to the Commission in a language fit to inform operational decision making. Such information and recommendations should always be backed by sections which in a transparent way presents the technical background in a language fit for scientific peers.

#### **Adoption of conservation and management measures**

11. The SC and the Commission to consider ways by which more precise information about potential VMEs can be obtained with a view to focus area closures to protect any potentially vulnerable areas.
12. The Commission to consider a revision of protocols for opening of areas closed to all fisheries in order to enable decisions to be made on basis of data which can realistically be collected without jeopardising the health of ecosystems and fish stocks.

<p><b>Capacity management</b></p> <p>No recommendations</p>
<p><b>COMPLIANCE AND ENFORCEMENT</b></p>
<p><b>Flag State Duties</b></p> <p>13. Given the positive results on compliance and the relatively reduced number of fishing vessels operating in the Convention area, the panel doesn't have any particular recommendation on flag State duties. However, if the number of active vessels in the Convention area sharply increases or if the general level of compliance within SEAFO worsens, the Commission should examine the possibility of developing new mechanisms within the System to facilitate flag States to ensure that their vessels comply with the principles of the Convention and conservation, management and control measures adopted by the Commission.</p>
<p><b>Port State Measures</b></p> <p>14. The Panel recommends that inspection reports should always be made available in due time to the Secretariat.</p> <p>15. The Commission should examine the opportunity to create and implement follow-up mechanisms on Port State infringements.</p>
<p><b>Monitoring, Control and Surveillance</b></p> <p>16. SEAFO should continue examining the usefulness of implementing a comprehensive observer programme, with compliance purposes, as set out in Article 16(3)(c) of the Convention. This analysis should take into account the viability to implementing such a programme and its necessity in order to further address compliance shortcomings and also the potential conflict with compliance and scientific observing.</p>



17. The Commission could also evaluate the opportunity to integrate in the System, measures to permit access by observers, with compliance purposes, from other Contracting Parties to carry out functions as agreed by the Commission.

18. If the fishing activity in the Convention Area sharply increases, the Commission should also examine the possibility to develop within the Compliance Committee an annual country by country compliance review complementary to the annual Compliance Committee compliance performance review undertaken on the basis of measure by measure assessments.

19. Consideration could be given to including in the System guidance and illustrated description of fishing methods and gears used in SEAFO and this would make the guide more complete. This could lead to if necessary the development of conservation and Management Measures for gear configuration and for mesh and hook size and/or numbers.

#### **Follow-up on Infringements**

20. SEAFO should develop more detailed procedures and requirements for follow-up on detected infringements through the application of the System and the annual compliance review performed by the Compliance Committee and endorsed by the Commission in accordance with Article 16 (3) (d) of the Convention.

#### **Cooperative Mechanisms to Detect and Deter Non-compliance**

21. The Commission should examine the opportunity to develop and adopt measures for observation to give effect to Article 14(3)(g) (give access of observers, with compliance purposes, from other Contracting Parties) and article 16(3)(c) (observer programme with compliance purposes) of the SEAFO Convention.

22. SEAFO should consider amending the article 28 of the System in order to recognise IUU vessel lists of all relevant RFMOs, notably SIOFA.

#### **Market Related Measures**

23. If fishing activities sharply increase in SEAFO, the Commission should evaluate the need and consider the prospect to develop a Catch Documentation Scheme for relevant species in harmony to CDSs already in force in other RFMOs. In this context the Commission should closely follow the ongoing FAO works on Catch Documentation Scheme.

<b>DECISION MAKING AND DISPUTE SETTLEMENT</b>
<p><b>Decision-making</b></p> <p>24. The Commission should review Article 17 utilising as a guide the WCPFC Rules of procedure Rules 21-30 (Annex 2) and determine what issues must be decided by consensus and those that can be taken by a simple majority.</p> <p>25. Once this is decided the Commission should also agree to a voting procedure.</p> <p>26. The Commission should ensure the SC process stays free from political influence.</p>
<p><b>Dispute settlement</b></p> <p>No Recommendations</p>
<b>INTERNATIONAL COOPERATION</b>
<p><b>Transparency</b></p> <p>No Recommendations</p>
<p><b>Relationship to non-Contracting Parties cooperating with SEAFO</b></p> <p>27. The Commission should as a priority continue its efforts to encourage the United Kingdom on behalf of St Helena and its Territories to complete the ratification process to become a Contracting Party to the Convention. Particular emphasis should be put on the fact that St Helena and her Territories are coastal states and have waters adjacent to the waters of SEAFO and as such have responsibilities to co-operate under UNCLOS. (Articles 116-119 UNCLOS).</p>
<p><b>Relationship to non-cooperating non-Contracting Parties</b></p>

<p>28. SEAFO should continue to monitor any future fishing activities by vessels from non-cooperating non-Contracting Parties in the Convention Area that may take place, and take action as appropriate.</p> <p>29. SEAFO Secretariat should move to establish relationships between compliance staff in ICCAT, IOTC and CCSBT.</p>
<p><b>Cooperation with other international organisations</b></p> <p>22. No Recommendations</p>
<p><b>Special requirements of developing States</b></p> <p>30. The Panel encourages further contributions to be made to the Special Requirements Fund or by any other means.</p>
<p style="text-align: center;"><b>FINANCIAL AND ADMINISTRATIVE ISSUES</b></p>
<p>Financial and Administration issues</p> <p>31. That the Secretariat institutes a process of using numbered Circulars when communicating with members to ensure a more formal process of communication</p> <p>32. All correspondence and meeting papers reports be sent and stored electronically</p> <p>33. The Commission considers changing the schedule for its annual meetings to begin on Tuesday with Finance and Administration and Compliance meetings held on Monday.</p> <p>34. The Commission either finalises the report of the annual meeting at the meeting or develops a process and timeframe for clearing meeting reports</p> <p>35. The Commission considers establishing an operational reserve fund</p> <p>36. When appropriate SEAFO considers extending its mandate to cover non tuna fisheries in the broader Atlantic.</p> <p><b>Staff regulations and remuneration</b></p>

37. The panel recommends that SEAFO immediately reviews the staff regulations including the salaries and conditions of staff to ensure that they are in line with the most recent and modern RFMOs, including those regulations being developed for SIOFA.
38. Salaries should be calculated in US dollars converted monthly to Namibian dollars for payment. For current professional staff their salaries must be adjusted back to parity for when they joined the organisation. Whether SEAFO considers payment of arrears is up to the Commission but staff of any international organisation should not be put in a position where they lose 50% of the actual value of their salaries due to currency fluctuations.
39. The classification of the ES position be immediately reviewed and upgraded to a P5 equivalent.
40. The Chair each year undertakes a formal review of the ES performance against an agreed criteria so that the salary for the ES can be progressed through pay points
41. The ES conducts performance reviews for the staff for the same purpose.
42. The Commission adopts salary scales for all staff positions
43. The Commission either pays or contributes significantly to the cost of medical/ health and travel insurance.
44. The Commission reviews and considers the other potential allowances and conditions listed above.

**Annex 1****CRITERIA FOR THE PERFORMANCE REVIEW****Objectives**

The objectives of the work to be carried out by the Review Panel shall be:

- To assess the performance of SEAFO since 2011 against the objectives set out in the Convention and any other international instruments relevant to the conservation and management of living marine resources in the Convention Area.
- Consideration should also be given to the developments in fisheries and ocean management that have taken place, notably during the period covered by the Review.

The Review shall be conducted on the basis of the criteria provided in table below:

<b>Area</b>	<b>General criteria</b>	<b>Detailed criteria</b>
1. <i>Conservation and management</i>	Status of living marine resources	<ul style="list-style-type: none"> <li>• Status of marine living resources under the purview of SEAFO.</li> <li>• Trends in the status of those resources.</li> <li>• Status of species that belong to the same ecosystems as, or are associated with or dependent upon, targeted marine living resources.</li> <li>• Trends in the status of those species.</li> </ul>
	Ecosystem approach	<ul style="list-style-type: none"> <li>• Extent to which SEAFO decisions take account of and incorporate an ecosystem approach to management.</li> </ul>
	Data collection and sharing	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has agreed formats specifications and time frames for data submissions, notably taking into account Annex 1 of the 1995 UN Fish Stocks Agreement.</li> <li>• Extent to which SEAFO Contracting Parties, individually or through SEAFO, collect and share complete and accurate data concerning marine living resources and other relevant data in a timely manner.</li> <li>• Extent to which fishing and research data and fishing vessel and research vessel data are gathered by SEAFO and shared among Contracting Parties.</li> </ul>

		<ul style="list-style-type: none"> <li>• Extent to which SEAFO is addressing any gaps in the collection and sharing of data as required.</li> </ul>
	Quality and provision of scientific advice	<ul style="list-style-type: none"> <li>• Extent to which SEAFO receives and acts on the basis of the best scientific advice relevant to the marine living resources under its purview, as well as to the effects of harvesting, research, conservation and associated activities, on the marine ecosystem.</li> </ul>
	Adoption of conservation and management measures	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has adopted conservation and management measures based on the best scientific advice available to ensure the long-term conservation and sustainable use of living marine resources.</li> <li>• Extent to which SEAFO has applied a precautionary approach as set forth in the Article 6 of the 1995 UN Fish Stocks Agreement and Article 7.5 of the Code of Conduct for Responsible Fisheries, including the application of precautionary reference points.</li> <li>• Extent to which consistent/compatible management measures have been adopted as set out in Article 7 of the 1995 UN Fish Stocks Agreement.</li> <li>• Extent to which SEAFO successfully allocates fishing opportunities consistent with the Article 20 of the SEAFO Convention and Article 11 of the 1995 UN Fish Stocks Agreement.</li> <li>• Extent to which SEAFO has moved toward the adoption of conservation and management measures for previously unregulated fisheries, including new and exploratory fisheries.</li> <li>• Extent to which SEAFO has taken due account of the need to conserve marine biological diversity and minimise harmful impacts of harvesting, research, conservation and associated activities on marine living resources and marine ecosystems.</li> <li>• Extent to which SEAFO has adopted measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target marine living resources, and impacts on associated or dependent species through measures including, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques.</li> <li>• Extent to which SEAFO has adopted and is implementing effective rebuilding plans for depleted or overfished stocks including guidance for stocks under moratoria.</li> </ul>
	Capacity management	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has identified fishing capacity levels commensurate with the</li> </ul>

		<p>conservation, including rational use, of marine living resources.</p> <ul style="list-style-type: none"> <li>• Extent to which SEAFO has taken actions to prevent or eliminate excess fishing capacity and effort.</li> <li>• Extent to which SEAFO monitors the levels of fishing effort, including taking into account annual notifications for participation by Contracting Parties.</li> </ul>
2. Compliance and enforcement	Flag State duties	<ul style="list-style-type: none"> <li>• Extent to which SEAFO Contracting Parties are fulfilling their duties as Flag States under the Convention establishing SEAFO, pursuant to measures adopted by SEAFO, and under other international instruments, including, <i>inter alia</i>, the 1982 Law of the Sea Convention, 1995 UN UNFSA and the 1993 FAO Compliance Agreement, as applicable.</li> <li>• Extent to which these measures are effectively implemented.</li> </ul>
	Port State measures	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has adopted measures relating to the exercise of the rights and duties of its Contracting Parties as Port States, as reflected in the 2009 FAO Port State Measures Agreement.</li> <li>• Extent to which these measures are effectively implemented.</li> </ul>
	Monitoring, control and surveillance (MCS)	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has adopted integrated MCS measures (e.g. required use of VMS, observers, catch documentation and trade tracking schemes, restrictions on transshipment, boarding and inspection schemes).</li> <li>• Extent to which these measures are effectively implemented.</li> </ul>
	Follow-up on infringements	<ul style="list-style-type: none"> <li>• Extent to which SEAFO and its Contracting Parties follow up on infringements to management measures.</li> </ul>
	Cooperative mechanisms to detect and deter non-compliance	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has established adequate cooperative mechanisms to both monitor compliance and detect and deter non-compliance (e.g. compliance committees, vessel lists, sharing of information about non-compliance).</li> <li>• Extent to which these mechanisms are being effectively utilised.</li> </ul>
	Market-related measures	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has adopted measures relating to the exercise of the rights and duties of its Contracting Parties as Market States for marine living resources, notably to combat IUU fishing.</li> <li>• Extent to which these measures are being effectively utilised.</li> </ul>

3. <i>Decision-making and dispute settlement</i>	Decision-making	<ul style="list-style-type: none"> <li>• Efficiency of Commission meetings and working groups in addressing critical issues in a timely and effective manner.</li> <li>• Extent to which the SEAFO Scientific Committee is reaching its objectives and advising the Commission.</li> <li>• Extent to which the Commission is following the Scientific Commission recommendations.</li> <li>• Extent to which SEAFO has transparent and consistent decision making procedures that facilitate the adoption of conservation measures in a timely and effective manner.</li> <li>• Existence of an informal mechanism of cooperation between Contracting Parties based on reciprocities.</li> </ul>
	Dispute settlement	<ul style="list-style-type: none"> <li>• Extent to which SEAFO has Established adequate mechanisms for resolving disputes.</li> </ul>
4. <i>International cooperation</i>	Transparency	<ul style="list-style-type: none"> <li>• Extent to which SEAFO is operating in a transparent manner, taking into account the Article 112 of the UN Fish Stocks Agreement and the Article 7.1.9 of the Code of Conduct for Responsible Fisheries.</li> <li>• Extent to which SEAFO decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion.</li> </ul>
	Relationship to non-Contracting Parties cooperating with SEAFO	<ul style="list-style-type: none"> <li>• Extent to which non-Contracting Parties have undertaken fishing activities in the SEAFO Regulatory Area.</li> <li>• Extent to which SEAFO facilitates cooperation between Contracting Parties and non-Contracting Parties, including through encouraging non-Contracting Parties to become Contracting Parties or to implement voluntarily SEAFO conservation measures.</li> </ul>
	Relationship to non-cooperating non-Contracting Parties	<ul style="list-style-type: none"> <li>• Extent to which SEAFO provides for action in accordance with international law against non-Contracting Parties undermining the objective of the Convention, as well as measures to deter such activities, and also encouraging them to become Contracting Parties or to implement voluntarily SEAFO conservation measures.</li> </ul>
	Cooperation with international organisations	<ul style="list-style-type: none"> <li>• Extent to which SEAFO cooperates with other international organisations and other relevant international organisations.</li> </ul>
	Special requirements of Developing States	<ul style="list-style-type: none"> <li>• Extent to which SEAFO recognises the special needs of Developing States and pursues forms of cooperation with Developing States, taking into account Part VII of the 1995 UN Fish Stocks Agreement and the Article 5 of the Code of Conduct for Responsible Fisheries.</li> </ul>



		<ul style="list-style-type: none"> <li>• Extent to which SEAFO Contracting Parties, individually or through the Commission, provide relevant assistance to Developing States, notably reflecting Article 26 of UN Fish Stocks Agreement.</li> </ul>
<i>5. Financial and administrative Issues</i>	Availability of resources for activities	<ul style="list-style-type: none"> <li>• Extent to which financial and other resources are made available to achieve the aims of SEAFO and to implement SEAFO's decisions.</li> </ul>
	Efficiency and cost-effectiveness	<ul style="list-style-type: none"> <li>• Extent to which SEAFO is efficiently and effectively managing its human and financial resources, including those of the Secretariat.</li> <li>• Extent to which the schedule and organisation of the meetings could be improved.</li> </ul>
	Staff matters	<ul style="list-style-type: none"> <li>• To evaluate staff regulations, notably regarding career progression, cost of living and related benefits, Namibian Dollar fluctuations and competitiveness with other RFMOs,</li> </ul>

To assist the Performance review exercise, the SEAFO Secretariat will provide the Panel with background reports and other material relevant to each criterion.

**ANNEX 2 WCPFC Rules of Procedure on Decision Making**

## VII. DECISION-MAKING

*Voting rights***Rule 21**

Each member of the Commission shall have one vote, unless otherwise provided in the Convention.

*Decision-making***Rule 22**

1. As a general rule, decision-making in the Commission shall be by consensus. For the purposes of these rules, “consensus” means the absence of any formal objection made at the time the decision was taken.

2. If all efforts to reach a decision by consensus have been exhausted, decisions by voting in the Commission on questions of procedure shall be taken by a majority of those present and voting. Decisions on questions of substance shall be taken by a three-fourths majority of those present and voting provided that such majority includes a three-fourths majority of the members of the South Pacific Forum Fisheries Agency present and voting and a three-fourths majority of non-members of the South Pacific Forum Fisheries Agency present and voting and provided further that in no circumstances shall a proposal be defeated by two or fewer votes in either chamber. When the issue arises as to whether a question is one of substance or not, that question shall be treated as one of substance unless otherwise decided by the Commission by consensus or by the majority required for decisions on questions of substance.

3. If it appears to the Chairman that all efforts to reach a decision by consensus have been exhausted, the Chairman shall fix a time during that session of the Commission for taking the decision by a vote. At the request of any member, the Commission may, by a majority of those present and voting, defer the taking of a decision until such time during the same session as the Commission may decide. At that time, the Commission shall take a vote on the deferred question. This rule may be applied only once to any question.

4. Elections of individuals shall be conducted in accordance with article 20 of the Convention. In the event of a vote, notwithstanding the provisions of rule 24, the election shall be conducted by secret ballot. If no candidate obtains in the first ballot the necessary majorities of the votes cast, a second ballot restricted to the two candidates obtaining the largest number of votes shall be taken. If in the second ballot the votes are equally divided, the balloting shall be continued until one candidate secures the necessary majorities of the votes cast.

5. For the purposes of these rules, and subject to rules 21 and 34, the phrase “those present and voting” means members of the Commission present and casting an affirmative or negative vote. Members of the Commission who abstain from voting shall be considered as not voting.

*Decisions requiring a consensus***Rule 23**

Decisions on questions of substance arising under the following provisions of the Convention shall be taken by consensus: article 9, paragraph 8 (adoption, and amendment, of rules of procedure), article 10, paragraph 4 (decisions relating to the allocation of total allowable catch or the total level of fishing effort), article 17, paragraph 2 (adoption of financial regulations), article 18, paragraphs 1 and 2 (adoption of the budget and a scheme for assessment of contributions to the budget), and article 40 (amendments to the Convention).

*Method of voting*

**Rule 24**

The Commission shall vote by show of hands or by standing, but any member of the Commission may request a roll-call. The roll-call shall be taken in the alphabetical order of the names of the members of the Commission participating in that session, beginning with the member whose name is drawn by lot by the Chairman. The name of each member of the Commission shall be called in any roll-call, and one of its representatives shall reply “yes”, “no” or “abstention”. The result of the voting shall be inserted in the record in the alphabetical order of the names of the members.

*Conduct during voting*

**Rule 25**

After the Chairman has announced the commencement of voting, no member of the Commission may interrupt the voting, except that members of the Commission may interrupt on a point of order in connection with the actual conduct of voting.

*Explanation of vote*

**Rule 26**

Members of the Commission may make brief statements consisting solely of explanations of their votes before the voting has commenced or after the voting has been completed. The Chairman may limit the time to be allowed for such statements. A member of the Commission sponsoring a proposal or motion shall not speak in explanation of vote thereon, except if it has been amended.

*Division of proposals and amendments*

**Rule 27**

A member of the Commission may move that parts of a proposal or of an amendment should be voted on separately. If objection is made to the request for a division, the motion for division shall be voted upon. Permission to speak on the motion for division shall be given only to two speakers in favour and two speakers against. If the motion for division is carried, those parts of the proposal or of the amendment which are approved shall then be put to the vote as a whole. If all operative parts of the proposal or of the amendment have been rejected, the proposal or the amendment shall be considered to have been rejected as a whole.

*Order of voting on amendments*

### **Rule 28**

When an amendment is moved to a proposal, the amendment shall be voted on first. When two or more amendments are moved to a proposal, the Commission shall first vote on the amendment furthest removed in substance from the original proposal and then on to the amendment next furthest removed therefrom and so on until all the amendments have been put to the vote. Where, however, the adoption of one amendment necessarily implies the rejection of another amendment, the latter amendment shall not be put to the vote. If one or more amendments are adopted, the amended proposal shall then be voted upon. A motion is considered an amendment to a proposal if it adds to, deletes from or revises part of the proposal.

#### *Order of voting on proposals*

### **Rule 29**

If two or more proposals relate to the same question, the Commission shall, unless it decides otherwise, vote on the proposals in the order in which they have been submitted. The Commission may, after each vote on a proposal, decide whether to vote on the next proposal.

#### *Taking decisions inter-sessionally*

### **Rule 30**

1. When necessary, a matter may be decided during the period between meetings by voting electronically via the Internet (e.g. email, secure Web site) or other means of communication (intersessional vote). Normally, such means of taking decisions shall be applied to matters of procedure, such as in deciding to convene a special session (Rule 3). However, in exceptional circumstances, where an urgent decision is necessary after efforts to reach a decision by consensus have been exhausted or as otherwise decided, such means of taking a decision may be applied to matters of substance.

2. When it is necessary to decide any matter during the period between meetings, the Chairman, on his or her initiative, or at the request of a member that has made a proposal, may move adoption without delay of such proposal by intersessional vote. The Chairman, in consultation with the Vice-Chairman, shall decide on the necessity of considering the proposal inter-sessionally, and the Chairman shall decide whether the proposal raises a matter of procedure or a matter of substance.

3. In any case in which the Chairman determines that it is not necessary to consider a motion proposed by a member inter-sessionally, the Chairman shall promptly so inform that member of such determination and the reasons therefor, at which time the proposer may request an intersessional vote on the Chairman's determination, to be subject to the majority decision rule for questions of procedure set forth in the Convention.

4. In cases in which the Chairman has concurred on the necessity of considering a proposal moved by a member inter-sessionally, the Executive Director shall promptly transmit the proposal and both determinations made by the Chairman under paragraph 2 to members via the official contacts provided for in rule 7, requesting that responses be returned within 40 days.

5. Members shall promptly acknowledge receipt of any request for an intersessional vote. If no acknowledgment is received within 10 days of the date of transmittal, the Executive Director

shall retransmit the request and shall use all additional means available to ensure that the request has been received.

6. Members shall respond within 40 days of the date of transmittal of a proposal, indicating whether they cast an affirmative vote, cast a negative vote, or abstain from voting. If no reply from a member is received within 40 days of transmittal, that member shall be recorded as having abstained.

7. The result of a decision taken by intersessional vote shall be ascertained by the Executive Director at the end of the voting period and promptly announced to all members. If any explanations of votes are received, these shall also be transmitted to all members. Subject to paragraphs 6 and 7 of article 20 of the Convention, if the proposal is adopted, it shall become binding 60 days after its adoption.

8. No proposal transmitted by the Executive Director for an intersessional vote shall be subject to amendment during the voting period.

9. A proposal that has been rejected by intersessional vote shall not be reconsidered by way of an intersessional vote until after the following meeting of the Commission, but may be reconsidered at that meeting.

**Annex 8 - Table containing the Review Panel recommendations and actions taken by the Commission**

<b>SCIENCE CONSERVATION AND MANAGEMENT</b>	
<b>Status of living marine resources</b>	
1. The SC should continue its work on updating the Stock Status reports for stocks targeted by fisheries or where there may be future commercial interest, with an emphasis on the species specific information as required for the Commission to fulfil its role as responsible for fisheries harvesting target species sustainably in the convention area.	
<b>Action:</b> The Commission took note of the recommendation and requesting the Scientific Committee to continue producing Stock Status Reports.	<b>Responsible entity:</b> Scientific Committee
2. For those potential target species where there are no current fisheries this could be based on a risk assessment rather than attempting to move to a full-fledged stock assessment in a situation where no data are available from non-existing fisheries.	
<b>Action:</b> The Commission noted the recommendation and referred the recommendation to the Scientific Committee for consideration and possible implementation.	<b>Responsible entity:</b> Scientific Committee
<b>Ecosystem approach</b>	
3. The SC should develop Ecosystem status reports regarding the interactions between fisheries and the marine ecosystem within the convention area. This could be one for the convention area or a set of reports for different subsystems within the area. The Ecosystem status report(s) should provide information and scientific advice as required by the Commission to fulfil its role in relation to ensuring that fisheries impacts on the marine ecosystem are acceptable. In order to use available resources efficiently on this task a risk based assessment, as discussed in the context of fish species, could be extended to fisheries and also include the wider ecosystem effects of fisheries.	
<b>Action:</b> The Commission noted the recommendation and referred the recommendation to the Scientific Committee for consideration and implementation. The Commission requested that in the future the SC report systematically contains a chapter on Ecosystem status reports.	<b>Responsible entity:</b> Scientific Committee
4. The Commission should identify criteria for maximum acceptable ecosystem impacts of fisheries in relation to inter alia habitat impacts and incidental bycatch.	
<b>Action:</b>	<b>Responsible entity:</b>

The Commission has to consider the recommendation and give guidance to the Scientific Committee.	Commission
5. In order to initiate this process, the Commission should request the SC to consider candidates for maximum acceptable impact which are relevant, measurable and can be monitored.	
<b>Action:</b> The Commission noted the recommendation and referred the recommendation to the Scientific Committee for advice.	<b>Responsible entity:</b> Scientific Committee
6. Means to provide better data to indicate potential VME areas should be investigated	
<b>Action:</b> The Commission referred the recommendation to the Scientific Committee for advice.	<b>Responsible entity:</b> Scientific Committee
<b>Data collection and sharing</b>	
No recommendations	
<b>Quality and provision of scientific advice</b>	
7. The SC should modify its rules of procedure to include guidance on how to proceed in order for the SC to provide conclusions which are helpful to the Commission in cases where there may be different opinions of a scientific nature between scientists,	
<b>Action:</b> The Commission referred the recommendation to the Scientific Committee for advice.	<b>Responsible entity:</b> Scientific Committee
8. The basis for analysis and recommendations by SC, which has important economic, social or political implications for fisheries or member states, should be subject to independent peer review as is normal in science in order to provide trust in the integrity of the advice and recommendation in question. Peer review should apply regarding the scientific soundness of methods to be applied. In cases where a methodology is implemented repeatedly on updated data sets, such as a stock status which is using peer reviewed methodology on a data set which has just been updated with recent data, the SC should be in a position to internally review whether the prescribed methodology has been applied according to standards. Independence of peer reviewers can be judged on basis of the normal criteria used in science including that the reviewer or the organisation he or she is affiliated to should not have an interest in the matter under scrutiny and that there are no relations in terms of organisation, family or economy to any scientists involved in the analysis in the first place.	
<b>Action:</b>	<b>Responsible entity:</b> Scientific Committee

The Commission noted the recommendation and referred the recommendation to the Scientific Committee for advice.	
<p>9. The RP recommends that rules of procedure are amended to ensure that scientists are not asked to have a double role in doing both scientific analysis and negotiating Commission decisions on the same matter. Members of the SC or scientists which have provided analysis serving as an input to the SC should never have double roles by also serving as negotiators or delegates to the Commission. Members of the SC may be available at Commission meetings as resource persons and may be asked by the Commission chair to explain SC analysis and recommendations, but they should never be called upon by national delegates of the Commission to substantiate a specific national viewpoint in the Commission.</p>	
<p><b>Action:</b> The Commission took note of the recommendation.</p>	<p><b>Responsible entity:</b> None</p>
<p>10. The SC reports (including the Stock status reports) should contain a section which contains information and recommendations directed to the Commission in a language fit to inform operational decision making. Such information and recommendations should always be backed by sections which in a transparent way presents the technical background in a language fit for scientific peers.</p>	
<p><b>Action:</b> The Commission agreed that the recommendations from the Scientific Committee are clear and fit to inform the Commission.</p>	<p><b>Responsible entity:</b> None</p>
<p><b>Adoption of conservation and management measures</b></p>	
<p>11. The SC and the Commission to consider ways by which more precise information about potential VMEs can be obtained with a view to focus area closures to protect any potentially vulnerable areas.</p>	
<p><b>Action:</b> The Commission referred the recommendation to the Scientific Committee for advice for future actions.</p>	<p><b>Responsible entity:</b> Scientific Committee</p>
<p>12. The Commission to consider a revision of protocols for opening of areas closed to all fisheries in order to enable decisions to be made on basis of data which can realistically be collected without jeopardising the health of ecosystems and fish stocks.</p>	
<p><b>Action:</b> The Commission referred the recommendation to the Scientific Committee for advice.</p>	<p><b>Responsible entity:</b> Scientific Committee</p>
<p><b>Capacity management</b></p>	
<p>No recommendations</p>	



<b>COMPLIANCE AND ENFORCEMENT</b>	
<b>Flag State Duties</b>	
13. Given the positive results on compliance and the relatively reduced number of fishing vessels operating in the Convention area, the panel doesn't have any particular recommendation on flag State duties. However, if the number of active vessels in the Convention area sharply increases or if the general level of compliance within SEAFO worsens, the Commission should examine the possibility of developing new mechanisms within the System to facilitate flag States to ensure that their vessels comply with the principles of the Convention and conservation, management and control measures adopted by the Commission.	
<b>Action:</b> The Commission noted the recommendation for future actions.	<b>Responsible entity:</b> None
<b>Port State Measures</b>	
14. The Panel recommends that inspection reports should always be made available in due time to the Secretariat.	
<b>Action:</b> The Commission called upon on Contracting Parties to provide the inspections report in time.	<b>Responsible entity:</b> CP's
15. The Commission should examine the opportunity to create and implement follow-up mechanisms on Port State infringements.	
<b>Action:</b> The Commission referred the recommendation to the Compliance Committee for advice.	<b>Responsible entity:</b> Compliance Committee
<b>Monitoring, Control and Surveillance</b>	
16. SEAFO should continuing examining the usefulness of implementing a comprehensive observer programme, with compliance purposes, as set out in Article 16(3)(c) of the Convention. This analysis should take into account the viability to implementing such a programme and its necessity in order to further address compliance shortcomings and also the potential conflict with compliance and scientific observing.	
<b>Action:</b> The Commission referred the recommendation to the Compliance Committee for advice as a matter of future case.	<b>Responsible entity:</b> Compliance Committee

17. The Commission could also evaluate the opportunity to integrate in the System, measures to permit access by observers, with compliance purposes, from other Contracting Parties to carry out functions as agreed by the Commission.	
<b>Action:</b> The Commission referred the recommendation to the Compliance Committee for advice.	<b>Responsible entity:</b> Compliance Committee
18. If the fishing activity in the Convention Area sharply increases, the Commission should also examine the possibility to develop within the Compliance Committee an annual country by country compliance review complementary to the annual Compliance Committee compliance performance review undertaken on the basis of measure by measure assessments.	
<b>Action:</b> The Commission referred the recommendation to the Compliance Committee for advice.	<b>Responsible entity:</b> Compliance Committee
19. Consideration could be given to including in the System guidance and illustrated description of fishing methods and gears used in SEAFO and this would make the guide more complete. This could lead to if necessary the development of conservation and Management Measures for gear configuration and for mesh and hook size and/or numbers.	
<b>Action:</b> The Commission referred the recommendation which suggests to consider the necessity of illustrated description of fishing gears in the System to the Compliance Committee for advice. As for the recommendation about development of conservation and management measures, the Commission agreed to take no action.	<b>Responsible entity:</b> Compliance Committee
<b>Follow-up on Infringements</b>	
20. SEAFO should develop more detailed procedures and requirements for follow-up on detected infringements through the application of the System and the annual compliance review performed by the Compliance Committee and endorsed by the Commission in accordance with Article 16 (3) (d) of the Convention.	
<b>Action:</b> The Commission referred the recommendation to the Compliance Committee for advice.	<b>Responsible entity:</b> Compliance Committee
<b>Cooperative Mechanisms to Detect and Deter Non-compliance</b>	
21. The Commission should examine the opportunity to develop and adopt measures for observation to give effect to Article 14(3)(g) (give access of observers, with compliance purposes,	

from other Contracting Parties) and article 16(3)(c) (observer programme with compliance purposes) of the SEAFO Convention.	
<b>Action:</b> The Commission referred the recommendation to the Compliance Committee for advice.	<b>Responsible entity:</b> Compliance Committee
22. SEAFO should consider amending the article 28 of the System in order to recognise IUU vessel lists of all relevant RFMOs, notably SIOFA.	
<b>Action:</b> The Commission referred the recommendation to Compliance Committee for advice.	<b>Responsible entity:</b> Compliance Committee
<b>Market Related Measures</b>	
23. If fishing activities sharply increase in SEAFO, the Commission should evaluate the need and consider the prospect to develop a Catch Documentation Scheme for relevant species in harmony to CDSs already in force in other RFMOs. In this context the Commission should closely follow the ongoing FAO works on Catch Documentation Scheme.	
<b>Action:</b> The Commission took note of the recommendation and agreed that the recommendation should be used for future reference.	<b>Responsible entity:</b> None
<b>DECISION MAKING AND DISPUTE SETTLEMENT</b>	
<b>Decision-making</b>	
24. The Commission should review Article 17 utilising as a guide the WCPFC Rules of procedure Rules 21-30 (Annex 2) and determine what issues must be decided by consensus and those that can be taken by a simple majority.	
<b>Action:</b> The Commission took note of the recommendation however, the Commission agreed to keep "Status Quo" pertaining to Article 17.	<b>Responsible entity:</b> None
25. Once this is decided the Commission should also agree to a voting procedure.	
<b>Action:</b> The Commission took note of the recommendation however, the Commission agreed to keep "Status Quo" pertaining to Article 17.	<b>Responsible entity:</b> None
26. The Commission should ensure the SC process stays free from political influence.	

<b>Action:</b> The Commission took note of the recommendation.	<b>Responsible entity:</b> Contracting Parties
<b>Dispute settlement</b>	
No Recommendations	
<b>INTERNATIONAL COOPERATION</b>	
<b>Transparency</b>	
No Recommendations	
<b>Relationship to non-Contracting Parties cooperating with SEAFO</b>	
27. The Commission should as a priority continue its efforts to encourage the United Kingdom on behalf of St Helena and its Territories to complete the ratification process to become a Contracting Party to the Convention. Particular emphasis should be put on the fact that St Helena and her Territories are coastal states and have waters adjacent to the waters of SEAFO and as such have responsibilities to co-operate under UNCLOS. (Articles 116-119 UNCLOS).	
<b>Action:</b> The Commission requested the Secretariat to officially approach Iceland, the United Kingdom (on behalf its Overseas Countries and Territories) and the United States of America to accede to the Convention.	<b>Responsible entity:</b> Secretariat
<b>Relationship to non-cooperating non-Contracting Parties</b>	
28. SEAFO should continue to monitor any future fishing activities by vessels from non-cooperating non-Contracting Parties in the Convention Area that may take place, and take action as appropriate.	
<b>Action:</b> The Commission took note of the recommendation and agreed to continue with the current practice to monitor any future fishing activities by vessels from non-cooperating non-Contracting Parties in the Convention Area that may take place, and take action as appropriate.	<b>Responsible entity:</b> Contracting Parties
29. SEAFO Secretariat should move to establish relationships between compliance staff in ICCAT, IOTC and CCSBT.	

<b>Action:</b> The Commission referred to recommendation to the Compliance Committee for advice.	<b>Responsible entity:</b> Compliance Committee
<b>Cooperation with other international organisations</b>	
No Recommendations	
<b>Special requirements of developing States</b>	
30. The Panel encourages further contributions to be made to the Special Requirements Fund or by any other means.	
<b>Action:</b> The Commission took note of the recommendation and encourages Contracting Parties to contribute to Special Requirements Fund.	<b>Responsible entity:</b> Contracting Parties
<b>FINANCIAL AND ADMINISTRATIVE ISSUES</b>	
<b>Financial and Administration issues</b>	
31. That the Secretariat institutes a process of using numbered Circulars when communicating with members to ensure a more formal process of communication	
<b>Action:</b> The Commission took note of recommendation and it was confirmed that the Secretariat has already implemented the recommendation.	<b>Responsible entity:</b> Secretariat
32. All correspondence and meeting papers reports be sent and stored electronically	
<b>Action:</b> The Commission noted the recommendation and adopted a decision that the future Commission meetings will be conducted "paperless"	<b>Responsible entity:</b> Secretariat & Contracting Parties
33. The Commission considers changing the schedule for its annual meetings to begin on Tuesday with Finance and Administration and Compliance meetings held on Monday.	
<b>Action:</b> The Commission noted the recommendation and agreed to maintain "Status Quo" pertaining to the Annual Commission meeting schedule.	<b>Responsible entity:</b> Commission

34. The Commission either finalises the report of the annual meeting at the meeting or develops a process and timeframe for clearing meeting reports	
<b>Action:</b> The Commission noted the recommendation and confirmed that the Rules of Procedures of the Commission para 41 stipulated that the Report of the Commission will be finalised at the meeting. The meeting took note that paragraph 41 will be implemented during the 2017 Annual Commission meeting.	<b>Responsible entity:</b> Secretariat
35. The Commission considers establishing an operational reserve fund	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
36. When appropriate SEAFO considers extending its mandate to cover non tuna fisheries in the broader Atlantic.	
<b>Action:</b> The Commission agreed to conduct a “one day” seminar next year to debate the “future” of SEAFO.	<b>Responsible entity:</b> Secretariat & CP’s
<b>Staff regulations and remuneration</b>	
37. The panel recommends that SEAFO immediately reviews the staff regulations including the salaries and conditions of staff to ensure that they are in line with the most recent and modern RFMOs, including those regulations being developed for SIOFA.	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
38. Salaries should be calculated in US dollars converted monthly to Namibian dollars for payment. For current professional staff their salaries must be adjusted back to parity for when they joined the organisation. Whether SEAFO considers payment of arrears is up to the Commission but staff of any international organisation should not be put in a position where they lose 50% of the actual value of their salaries due to currency fluctuations.	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
39. The classification of the ES position be immediately reviewed and upgraded to a P5 equivalent.	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
40. The Chair each year undertakes a formal review of the ES performance against an agreed criteria so that the salary for the ES can be progressed through pay points	

<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
41. The ES conducts performance reviews for the staff for the same purpose.	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
42. The Commission adopts salary scales for all staff positions	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
43. The Commission either pays or contributes significantly to the cost of medical/ health and travel insurance.	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF
44. The Commission reviews and considers the other potential allowances and conditions listed above.	
<b>Action:</b> The Commission referred the recommendation to SCAF for advice.	<b>Responsible entity:</b> SCAF

**Annex 9 - Scientific Committee Report**



SOUTH EAST ATLANTIC FISHERIES ORGANISATION (SEAFO)

**REPORT OF THE 12<sup>th</sup> SEAFO SCIENTIFIC COMMITTEE**

**6 October – 14 October 2016  
Windhoek, NAMIBIA**

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## **1. Opening and welcome remarks by the Chairperson**

- 1.1 The 12<sup>th</sup> Annual Meeting of the SEAFO Scientific Committee (SC) was convened on 6 October to 14 October 2016 at the Safari Hotel & Court, Windhoek, Namibia. The Chairperson, Mr. Paulus Kainge, opened the meeting and welcomed delegates. He emphasized that it would be a discussion of scientific issues and that all delegates were expected to freely express their scientific views so that issues can be resolved and the best possible advice forwarded to the Commission.

## **2. Adoption of agenda and meeting arrangements**

- 2.1. SC adopted the agenda ([Appendix I](#)) with the following points added:  
Point 19.5: Participation in CEEAF meeting on VME's 8-10 November 2016.  
Point 19.6: (Japan) Scientific survey in closed area and protocol for reopening of closed areas.

Members were informed of practical arrangements of the meeting by the Executive Secretary.

## **3. Appointment of Rapporteur**

- 3.1 After nomination and secondment, Dr Elizabeth Voges was appointed as rapporteur for the Scientific Committee meeting.

## **4. Introduction of Observers**

- 4.1 An observer from the Food and Agriculture Organisation (FAO) attended part of the 12<sup>th</sup> SEAFO Scientific Committee ([Appendix II](#)).

## **5. Introduction of Delegates**

- 5.1 A total of 10 Scientific Committee members representing five Contracting Parties, excluding the SEAFO Secretariat, attended the 12<sup>th</sup> SEAFO Scientific Committee meeting ([Appendix II](#)). No members from South Africa and Korea attended.

## **6. Review of submitted SEAFO working documents and any related presentations, allocation to the agenda items**

- 6.1 A total of 16 contributions and working documents were considered during the 2016 SC meeting ([Appendix III](#)).

## **7. Review of the 2016 Work Program**

SC listed in 2015 the following tasks for 2016:

*7.1 Output from task (a): FAO ABNJ Deep-Sea Project activity*

FAO ABNJ Deep-Sea Project activities are discussed under section 18 in this report.

*7.2 Output from task (b): Independent review of the 2015 Patagonian toothfish assessment*

The SC took note of the response from FAO and the independent reviewer, and expressed appreciation for the scientific opinion provided. The comments from the reviewer were useful to clarify the constraints of the approach applied given the limited data available. A longer time series of data of appropriate quality is needed for stock assessment. Until such data become available, stock assessments will be unlikely to form the basis for TAC advice. Exploratory stock assessment attempts are encouraged by the SC.

*7.3 Output from task (c): SC to provide guidelines on assessments of exploratory fisheries and develop procedures and standards for SC evaluation of such assessment, pertinent to CM 29/14 Articles 7.2 and 7.3.*

In accordance with CM30/15 the SC developed procedures and standards during this meeting for its handling and evaluation of applications for exploratory fisheries. The SC in its work on this issue benefited from procedures and standards developed by NEAFC. The document is included as ([Appendix IV](#)) and the secretariat will make it publically available on the SEAFO website.

*7.4 Output from task (d): Small groups of scientists and compliance experts to review reporting forms.*

The task was completed during the Commission meeting in December 2015. A report (which was adopted by the Commission, was submitted to the meeting (“Report of the ad-hoc meeting of scientists and compliance experts”).

**8. Report by the Executive Secretary presenting all landings, incidental bycatch and discard tables updated to September 2016.**

8.1 The Executive Secretary presented updated landings, bycatch and discards data for the period up to September 2016. As of October, the only fishing conducted has been by one vessel fishing for Patagonian toothfish (Tables 1-5 of [Appendix V](#)).

8.2 SC members raised the issue of possible bycatch of SEAFO species by ICCAT Fisheries operating in the SEAFO CA.

**9. Review landings, spatial and temporal distribution of fishing activity and biological data of non-benthic species**

9.1 The SC reviewed all landings data on non-benthic species (Tables 6-22 of [Appendix V](#)). VMS data were presented by the Secretariat and demonstrated the special distribution of fishing activity in the past year.

**10. Review the spatial distribution of reported catches of benthic organisms (corals, sponges etc.)**

10.1 There were no recorded encounters over the period 2010-2016 of bycatches exceeding the current VME threshold levels – as per CM 30/15 and Table 23 -35 of [Appendix VI](#).

## 11. Review data of the 2016 Japanese Exploratory Fishing and plan for 2017

- 11.1 Japan presented results for the 2015/2016 exploratory fishing conducted on the Discovery seamount complex in Sub-Area D, Discovery Area ([Appendix XII](#)). There was no request to open the areas for fishing because more exploration is needed.
- 11.2 The SC took note of the submission for exploratory fishing in new bottom fishing ground in the SEAFO convention area in 2017 by Japan ([Appendix XIII](#)). The contracting party was advised to follow the process as stipulated in CM 30/15 and submit a notice of intent to the Executive Secretary at least 60 days before the fishing activities commence. The SC will then evaluate and assess the application, using the developed procedures and standards as specified by articles 7.2 and 7.3 of CM 30/15.

It was noted that if the application for 2017 were approved by the SC through correspondence, the proposal could be submitted to the Commission for consideration either at the 2016 Commission meeting or through correspondence.

## 12. Review Stock Status Reports

- 12.1 Stock status reports for Patagonian toothfish, Deep-Sea Red Crab, Orange roughy, Alfonsino and Pelagic armourhead were reviewed and updated. The stock status reports are presented as follows:
- ⇒ Orange roughy - [Appendix VII](#);
  - ⇒ Deep-Sea Red Crab - [Appendix VIII](#);
  - ⇒ Patagonian toothfish - [Appendix IX](#);
  - ⇒ Alfonsino - [Appendix X](#) and
  - ⇒ Pelagic armourhead - [Appendix XI](#).
- 9.1

## 13. Review research activities in the SEAFO CA since October 2015 to date

No new notifications of research activities were received. SC reiterates the continued need for scientific research in the SEAFO CA and emphasised that the proposal for new cruises as prioritised in 2015 is still valid.

## 14. Examine, where appropriate, assessments and research done by neighbouring states and other organisations

- 14.1 Namibia reported that a biomass survey was conducted for Orange roughy within its EEZ during July 2016. Assessment and management recommendations for the Namibian stock are underway and should be available by April 2017. Since the Namibian and SEAFO fish are likely to belong to the same stock, results from the analysis of the Namibian stock shall be considered by SEAFO for future Orange roughy assessments.
- 14.2 South Africa submitted three reports on the annual assessment based on commercial data for *Dissostichus eleginoides*, conducted within the Prince Edward Islands South African EEZ

(Subareas 58.6 and 58.7 and part of Area 51) which were distributed to the SC members for further study.

- 14.3 The SC discussed the population structure of Patagonian toothfish in the SEAFO CA in relation to its global distribution and took note of nuclei otolith chemical studies undertaken with specimens collected at different regions of its distribution area. The SC recommended that similar research be conducted with specimens from SEAFO CA. Japan showed willingness to cooperate by collecting otoliths. EU–Spain volunteered to retrieve otoliths collected during past surveys. SC will make an effort to find a laboratory to do the analysis, once the otoliths have been retrieved.
- 14.4 SC identified the models adopted by CCAMLR to assess the toothfish stock. In recent years WG-FSA accepted that C++ Algorithmic Stock Assessment Laboratory (CASAL) is the most appropriate method to assess stock status on a regional basis. CASAL is an integrated assessment tool for modelling population dynamics of marine species, including fishery stock assessments. It can implement either an age- or size-structured model, optionally also structuring the population by sex, maturity, and/or growth. The data used can be from many different sources of information, for example catch-at-age or catch-at-size data from commercial fishing, survey and other biomass indices, survey catch-at-age or catch-at-size data, and tag-release and tag-recapture data.

Furthermore, other methods are used in CCAMLR as the Generalized Yield Model (GYM), that also satisfy the CCAMLR decision rules, as well as, intermediate approaches to get local estimation of biomass as the simple Petersen method.

CCAMLR mainly uses tag-release and tag-recapture data to assess stock status.

- 14.5 The first SIOFA Scientific Committee was held in March 2016 and a work plan of stock assessments was adopted, including 2017-2018 for orange roughy and 2018-2019 for alfonsino. As for Patagonian toothfish, a stock assessment will be collaboratively conducted between CCAMLR and SIOFA.

## **15. Review Total Allowable Catches and related management conditions for Patagonian toothfish, Alfonsino, Pelagic armourhead, Orange roughy and Deep-sea Red Crab**

- 15.1 The SC reviewed the Total Allowable Catches (TAC) and related management rules for Patagonian toothfish, Alfonsino, Pelagic armourhead, Orange roughy and Deep-sea Red Crab for 2017 and 2018. Please see relevant Stock Status Reports (Appendices [VIII](#) -[XI](#)) or revert to Section 21 of this report for details on this topic.

### 15.2 Orange roughy

SC considered available data on orange roughy since the inception of the fisheries in SEAFO CA.

There is no fishery data available since 2005 for orange roughy within the SEAFO CA, as a result SC cannot conduct stock assessment of the orange roughy stock within the Convention Area.

**SC recommends a status quo for Division B1, i.e. a moratorium on directed fishery in Division B1 and allowance for bycatch limit as proportion (10%) of the average of landings from the last five years with positive catches (i.e. 2001-2005), equivalent to 4 tonnes.**

Due to a lack of new information, the SC did not review the current status quo of the 50 tonnes allowance in the remainder of the area.

A harvest control rule shall be developed for orange roughy in the future as data becomes available.

### 15.3 Deep-Sea Red Crab

The SC emphasize that the application of the HCR despite that there was no fishery in 2016, assumes that the CPUE trends derived in 2015 has been maintained. The validity of that assumption is uncertain. The TAC for 2016 year was not taken but the reasons for the interruption in the fishery are not known.

There was no fishery in 2016 hence no new catch or effort data which are data required to update the CPUE series forming the basis for the application of the HCR as adopted by the Commission in 2015. The SC resorted to applying the HCR based on pre 2016 CPUE trend (Figure 17).

The SC agreed to adopt the best estimate of the slope which is -0.1213. Under this scenario the HCR stipulates the use of “Rule 2” for setting the TAC.

However, the difference between the 2016 and proposed 2017 TAC is greater than the 5% limit stipulated by the HCR. **SC therefore recommends a TAC for 2017 and 2018 be set at 180 tons for Division B1, and 200 tons for the remainder of the SEAFO CA.**

### 15.4 Patagonian Toothfish

In 2015 the Commission adopted a TAC of 264 t in Sub-Area D applying the harvest control rule, and zero tonnes for the remainder of the SEAFO CA for 2016.

The SC notes that in both 2015 and 2016 about 22% of the TAC was taken (incl. the experimental fishery), hence the fishery is not constrained by the TAC.

The application of the HCR requires as input a 5-year time-series of recent CPUE data. The CPUE series applied in 2015 was derived by pooling all available data in the SEAFO CA. No analysis was made to determine if pooling was a valid approach. Also, the series first discussed in 2016 was not standardised as in 2015, and questions were asked about the consistency of the analysis between years.

The SC explored standardization using generalised linear models (GLM), but the explorations indicated that the variance explained was too low to extract meaningful results, hence further efforts would be required. There were, however, clear indications of significant area-effects, hence pooling of data from different fishing areas was probably not valid.

The SC then resorted to deriving CPUE series for separate fishing areas for which the more extensive continuous time-series of catch and effort data are available in the SEAFO database, i.e. the Meteor and Discovery seamounts. Data from the Western part were excluded from the

assessment as the time series was not complete. Only Japanese data within the 2011 agreed footprint, i.e. from the party taking the bulk of the catch in all years, were used in order to retain consistency through the time series.

It is uncertain whether the two CPUE series reflects abundance, but in the absence of other alternatives, the series from Meteor and Discovery were considered valid for the derivation of TACs using the recommended and accepted HCR.

The CPUE series as derived both have best estimates of slope close to zero. For Discovery the best estimate is slightly negative, for Meteor the estimated slope was zero (Fig. 9).

Applying the HCR based on a weighted average of the CPUE slopes on Meteor and Discovery a TAC estimate of 266 t was derived. **The SC recommends a TAC for Subarea D of 266 t and a zero TAC for the remainder of the SEAFO CA for the years 2017 and 2018.**

### 15.5 Alfonsino

There have been no landings of alfonsino in the last 3 years (including 2016). The SC was therefore unable to apply the HCR previously proposed by the SC and accepted by the Commission.

Alfonsino is a seamount-associated species that form aggregations, and the experience worldwide is that serial depletion of aggregations at different seamounts can happen. In the recent fisheries for the species in SEAFO the fishery was concentrated on a single seamount summit, the Valdivia Bank, where it was mainly a bycatch in the target fishery for pelagic armourhead. The only information available from 2015 is the limited observations from the RV Dr Fridtjof Nansen survey noting that only scattered specimens of the species occurred in the main fishing area.

It is also recognized that the last three year's interruption in the exploitation has provided potential for recovery of the resource in the main fishing area on Valdivia Bank. There is however not enough information from any source to determine with certainty whether recovery has happened or not happened.

The SC however recognised that without future fishery data nor survey information the basis for providing scientific advice will deteriorate. The SC therefore discussed what advisory option would be most appropriate while maintaining the potential for data provision from a fishery. It must also be taken into account that the alfonsino is mainly a bycatch and that the catches will depend on the activity level in the target fishery for armourhead.

The SC considered the TAC level advised in 2013 as precautionary at that time. Considering no fishing pressures last 3 years and development of the resource, **the SC recommends a TAC of 200 t (status quo) for the SEAFO CA, of which a maximum of 132 tonnes may be taken in Division B1.**

### 15.6 Pelagic armourhead

The TAC advised in 2014 was derived using the average of the catches in 2011 and 2012. This is a simplistic approach not based on stock assessments or stock trend indices, hence the resulting

TAC advice will be uncertain. Currently, due to the interruption of the fishery, the recommended and accepted HCR cannot be applied, nor the average of recent catches as in 2014. Due to the lack of recent fishery data there is even greater uncertainty than in 2014.

Prior to the interruption of the fishery, the catch per unit of effort had declined to a low level. The survey in 2015 did not detect concentrations of armourhead in the previous fishing area at that time. It was expressed that the absence of a fishery has provided a potential for recovery. Despite the fishing opportunity available in the past 3 years, there was no fishery, and this lack of activity has not been explained.

Due to the uncertainties explained above, SC members expressed different views on the TAC advice for 2017-2018. **The agreed advice is a TAC of 135 tonnes.** This level is slightly lower than that derived in 2014, hence possibly more precautionary. It must be emphasized that the state of the stock is unknown.

**16. The SC to conduct a scientific evaluation on the stock status of deep-water sharks in the SEAFO CA and to consider how the issue, pertaining to deep-water sharks, is dealt with in other RFMO's**

16.1 The SC considered this request and acknowledges that the status of the deep-water sharks in the SEAFO CA is not known. Furthermore, the SC recognises that no assessment of the deep-water sharks in the SEAFO CA has ever been conducted, due to the lack or insufficient data available. Therefore, the SC is not in a position to conduct such an evaluation and subsequently is unable to provide scientific advice.

16.2 The SC considered how the issue of deep-water sharks is dealt with in NEAFC and CCAMLR. NEAFC have adopted a recommendation on a ban of directed fishing for deep sea sharks since 2012 (NEAFC Recommendation 7: 2012). CCAMLR adopted a conservation measure that bans directed fishing on shark species in the Convention Area, for purposes other than scientific research. Any by-catch of sharks, especially juveniles and gravid females, taken accidentally in other fisheries, shall, as far as possible, be released alive (CM 32-18 (2006).

**17. The SC to evaluate the impact of possible gillnet fisheries in SEAFO CA in light of scientific information that became available since the adoption of the Recommendation 1/2010**

No deep-water gillnet fisheries exist in SEAFO CA. The SC is not able to quantify the potential effect of deep-water gillnet fisheries on bottom resources and their habitats.

The SC noted however that the knowledge available on the effect of deep-water gillnet fisheries over probably similar habitats as in the SEAFO CA show that their use may have significant negative effects on those ecosystems. Issues of concern are that abandoned or lost nets become entangled on three-dimensional features, and can maintain high ghost fishing catch rates for relatively long periods (several months to several years) (FAO; 2016).

The SC noted that NEAFC has had a bottom gillnet ban beyond 200 metres since 2006 (REC. 03/2006).

SC noted that the technical basis for Recommendation 2/2009 regarding gillnet fishing is still valid.

*Reference:*

*FAO. 2016. Abandoned, lost or otherwise discarded gillnets and trammel nets: methods to estimate ghost fishing mortality, and the status of regional monitoring and management, by Eric Gilman, Francis Chopin, Petri Suuronen and Blaise Kuemlangan. FAO Fisheries and Aquaculture Technical Paper No. 600. Rome. Italy.*

## **18. ABNJ project: activities for 2016 ([Appendix XIV](#))**

The FAO Coordinator of the ABNJ Deep Seas Project provided the Scientific Committee with an update on the Project. The Project has produced a range of publications that will be available later in 2016 including:

- a review of the international legal and policy instruments related to deep-sea fisheries and biodiversity conservation in the ABNJ;
- technical papers on the biology and assessment of alfonsino and orange roughy;
- the 2nd edition of the Worldwide Review of Bottom Fisheries in the High Seas and
- a report on best practices in VME encounter protocols and impact assessments.

### **9.2**

Activities relevant to SEAFO that will be undertaken over the next 12 months include:

- a review of traceability in deep sea fisheries;
- a review of rights based management;
- an examination of monitoring control and surveillance practices and
- characterization of decent work practices related to deep sea fisheries.

The project will also trial the use of electronic monitoring systems on deep sea fishing vessels operating in the ABNJ to collect information on VMEs.

The Scientific Committee noted that several of the project's areas may have direct benefit to SEAFO. Potential links were identified in the Scientific Committee's 2017 work plan.

## **19. Any other matters**

### *19.1 SEAFO SC Journal*

SC agreed to explore publishing more of the working documents on the SEAFO website as Scientific Reports (SCR and SCS reports like NAFO).

### *19.2 Presentation by the World Meteorological Organization (WMO)*

The SC noted the proposal from the WMO for collaborations on various issues. It was however found that there are no relevant data collection efforts and this will be reported by the Executive Secretary in his reply to WMO. The SC suggested that WMO approach the CP's directly in this regard and should any research emanate from collaboration between WMO and CP's the SC should be informed. SC reiterates the continued need for scientific research to be undertaken in the SEAFO CA.



### *19.3 Patagonian toothfish tagging: Collaboration with CCAMLR*

The SC considered and appreciated the request and recognises the value of the tagging program and the collaboration with CCAMLR. The SC encourages CCAMLR to approach Japan (only fishing CP for toothfish currently) with regards to this issue. The SC hopes that this will facilitate the expansion of the tagging program. The Japanese delegation indicated that they will assist with tag retrieval.

### *19.4 Collaboration with SIOFA Scientific Committee*

The SC appreciate the interest in exploring common issues and nominated Luis López Abellán (EU) to represent SEAFO at the SIOFA SC meetings since he is a participant at that committee.

### *19.5 Participation in FAO/CECAF meeting – Dakar 8-10 November 2016*

A request was received by the Executive Secretary to nominate a representative of SEAFO to attend the CECAF meeting and present on “Identification of habitats and potential VME indicators”. Ivone Figueiredo (EU) was nominated to attend. Participation will be supported by the budget allocation to SC for activities in ABNJ project 2016.

## **19.6 Further considerations of guidelines and principles underlying evaluations of appropriateness of closures and possible protocols for revision of closures**

Japan proposed an approach for surveying closed areas using a commercial vessel as well as a protocol for reopening closed areas. Japan decided to withdraw the proposal because there was not sufficient support from the SC.

The SC agreed that Odd Aksel Bergstad will draft guidelines and principles underlying evaluations of appropriateness of closures and possible protocols for revision of closures for the SC meeting in 2017.

## **20. Advice and recommendations to the Commission on issues emanating from the 2016 meeting**

### Agenda Point 15:

All TAC's recommended are for the years 2017 and 2018

**Orange roughy:** SC recommends a status quo for Division B1, i.e. a moratorium on directed fishery in Division B1 and allowance for bycatch limit as proportion (10%) of the average of landings from the last five years with positive catches (i.e. 2001-2005), equivalent to 4 tonnes.

Due to a lack of new information, the SC did not review the current status quo of the 50 tonnes allowance in the remainder of the area.

**Deep-sea Crab:** SC recommends a TAC of 180 tons for Division B1, and 200 tons for the remainder of the SEAFO CA.

**Patagonian toothfish:** The SC recommends a TAC for Subarea D of 266 t and a zero TAC for the remainder of the SEAFO CA.

**Pelagic armourhead:** The SC recommends a TAC of 135 tonnes for the SEAFO CA. It must be emphasized that the state of the stock is unknown.

**Alfonsino:** The SC recommends a TAC of 200 t (status quo) for the SEAFO CA, of which a maximum of 132 tonnes may be taken in Division B1.

## 21. 2017 Work Program

### 21.1 *Orange Roughy:*

- Working document to be presented at 2017 meeting from Namibia on comparing historic catch positions and CPUE in Namibia and SEAFO CA. See how it changed over time (*Elizabeth Voges (Namibia)*).
- Report on Namibian survey of 2016 and assessment of the Namibian stock (*Elizabeth Voges (Namibia)*).
- Explore and report on the possibility of extending the Namibian biomass survey to former orange roughy fishing areas in the SEAFO CA (*Elizabeth Voges (Namibia)*).

9.3

### 21.2 *Patagonian toothfish:*

- Further exploration of the stock dynamics on the different fishing grounds and possible CPUE standardization methods as a group. (*Ivone Figueiredo (EU)*, *John Kathena (Namibia)*, *Tsutomu Tom Nishida (Japan)*, *Elizabeth Voges (Namibia)* and other members).

### 21.3 *Further considerations of guidelines and principles underlying evaluations of appropriateness of closures and possible protocols for revision of closures:*

- Draft document prepared for SC meeting 2017 (*Odd Aksel Bergstad (Norway)*).

### 21.4 *FAO/ABNJ deep-sea project:*

- Explore the possibility of convening an international workshop on deep-sea pot fisheries (*Secretariat*).
- Support the Namibian orange roughy assessment by arranging a meeting of experts (*Secretariat*).
- SC in collaboration with FAO/ABNJ to develop a checklist, application and evaluation template for exploratory fishing applications (*Secretariat*).
- SC Chair to send a letter to FAO/ABNJ indicating the need for additional research surveys in the SEAFO CA by the RV Dr. Fridjof Nansen (*Chair*).

### 21.5 *Participation in FAO/CECAF meeting – Dakar 8-10 November 2016 (Ivone Figueiredo (EU)).*

- Participation supported by the budget allocation to SC for activities in ABNJ project 2016, and report back at 2017 SC meeting.

### 21.6 *Reporting on SIOFA SC meeting (Luis Lopez-Abellan (EU)).*

### 21.7 *Bycatch species that could be incidentally taken in the SEAFO CA by ICCAT Fisheries:*

- Explore and report on possible bycatch of SEAFO species in the ICCAT. (*Beau M. Tjizoo (Namibia)*).

**22. Budget for 2017**

SEAFO SC participation in the FAO ABNJ project:- **Budget estimate: N\$ 50 000.** The funding is requested in order to host the deep sea pot fishery workshop in Swakopmund, Namibia.

**23. Adoption of the report**

The report was adopted by the meeting.

**24. Date and place of the next meeting**

Date: 12-18 October 2017

Swakopmund

Namibia

**25. Closure of the meeting**

The meeting was closed at 13h45 on Friday, 14<sup>th</sup> October 2016.

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## APPENDIX II – List of Participants

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**APPENDIX III – List of Working Documents submitted for the 12<sup>th</sup> SEAFO SC Meeting**

<b>Document Ref. Number</b>	<b>Agenda Item</b>	<b>Document Title</b>	<b>Provider</b>	<b>Availability of Document</b>
DOC/SC/00/2016	All	List of documents	Secretariat	Available before the meeting
DOC/SC/01/2016	All	Provisional agenda of the 12 <sup>th</sup> Annual Meeting of the Scientific Committee	Secretariat	Available before the meeting
DOC/SC/02/2016	All	Provisional Annotated Agenda of the 12 <sup>th</sup> Annual Meeting of the Scientific Committee	Secretariat	Available before the meeting
DOC/SC/03/2016	8/9/10	2016 Landing tables	Secretariat	Available before the meeting
DOC/SC/04/2016	11	Working document on the Japanese 2016 and 2017 exploratory fishing survey	Japan	
DOC/SC/05/2016	12	Stock Status Report <i>Dissostichus eleginoides</i>	Secretariat	Available before the meeting
DOC/SC/06/2016	12	Stock Status Report <i>Hoplostethus atlanticus</i>	Secretariat	Available before the meeting
DOC/SC/07/2016	12	Stock Status <i>Chaceon erythrae</i>	Secretariat	Available before the meeting
DOC/SC/08/2016	12	Stock Status Report of Southern Boarfish/pelagic amourhead	Secretariat	Available before the meeting
DOC/SC/09/2016	12	Stock Status Report of Alfonsino		
DOC/SC/10/2016	19	WMO INFORMATION	Secretariat	Available before the meeting
DOC/SC/11/2016	19	WMO fisheries Jul2016	Secretariat	Available before the meeting
DOC/SC/12/2016	19	WMO proposal	Secretariat	Available before the meeting
DOC/SC/13/2016	19	CAMMLR memo of tagging collaboration	Secretariat	Available before the meeting
DOC/SC/14/2016	19	Meeting Report (Adopted) with annexes	Secretariat	Available before the meeting
DOC/SC/15/2016	19	Signed letter to Mr Kainge	Secretariat	Available before the meeting
DOC/SC/16/2016	18	ABNJ Deep Seas Project Update	FAO	Available at the meeting



**APPENDIX IV - Procedures and standards for exploratory fishing in the SEAFO CA (Article 6, CM 30/15)****12 October 2016****Procedures and standards for the SEAFO Scientific Committee's consideration of proposals for exploratory fishing pursuant to CM 30/2015**

In the Articles 6 and 7 of the CM 30/2015 on **Bottom Fishing Activities and Vulnerable Marine Ecosystems in the SEAFO Convention Area** there are references to "procedures and standards developed by SC". The following procedures and standards were adopted by the SC as of 12 October 2016.

**SC OBLIGATIONS**

In accordance with Art. 6.3 and 7.2 of the CM 30/2015 SC will receive from the Secretariat the 'Notices of Intent' and the CP's preliminary assessment of a proposed exploratory fisheries. These documents are supposed to meet specified requirements in terms of content, i.e. as given in Art. 6.2, and 7.1 (Annex 3).

The task for SC is specified in Art. 7.3: 'SC shall, either at its next session or through correspondence, undertake an evaluation, in accordance with the precautionary approach, of the submitted documentation, taking account of the risks of significant adverse impact on VMEs. Such evaluation shall take place no later than 30 days following the date of submission of the Notice of Intent.' And further that SC shall 'use any other information required, including information from other fisheries in the region or similar fisheries elsewhere.'

And the overriding expectation is the following, given in Art. 7.4: 'SC shall subsequently provide advice to the Commission as to whether the proposed exploratory bottom fishing should be approved, or would have significant adverse impacts on VMEs and, if so, on whether proposed mitigation measures would prevent such impacts.

**PROCEDURES**

An SC procedure for handling exploratory fishing proposals must ensure that the required assessment of the specified documentation and a recommendation to the Commission can be generated, by correspondence or in a meeting, within 30 days after the date of submission of the Notice of Intent.

***Procedure:***

1. The Chair, upon receiving from the Secretariat a Notice of Intent and the CP's preliminary assessment, shall determine if the submitted documentation pertaining to the Notice of Intent contains the elements required in CM 30/2015 Art. 6.2. If elements are missing, requests should without delay be made to the relevant CP for supplementary material via the Executive Secretary.
2. When all the required documentation elements have been received, the documentation shall without delay be forwarded to SC members for evaluation. The date of submission of the Notice of Intent comprising all elements required in Art. 6.2 is the start date of the 30-day evaluation period in SC (CM 30/2015, Art. 7.3).
3. The Chair shall, via the Secretariat, without delay forward the complete submission to SC delegates from all CPs.
4. SC delegates shall carry out an independent evaluation of the submitted proposal in accordance with the SC standards.

5. SC delegate's evaluations and statements of opinions shall be forwarded to the Chair and other members of SC within 25 days after first receiving the completed Notice of Intent and the delegate's preliminary assessment.
6. In their responses to the Chair, SC delegates (one per CP) shall in writing comment on the submitted material and express whether the proposal should or should not be approved. Failure by delegates to respond within that 25 days deadline will be interpreted as meaning that the delegates assessment is that the exploratory fishing is unlikely to have significant adverse impacts (SAI) on VMEs.
7. If possible within the time-frame available, the evaluations shall be discussed in a SC meeting. Discussions in session shall complement rather than replace written evaluations by individual CPs. Decisions on recommendations to the Commission made in a meeting takes priority over decisions reached on the basis of statements received by correspondence.
8. Upon receiving the responses from SC members and comments received in session, the Chair shall summarise the evaluations and formulate a response to the Commission in accordance with Art. 7.3. If there are differing views on the recommendation, these views shall be reflected in the response.
9. The SC recommendation shall be forwarded to the Commission as soon as it is completed and at the latest within 30 days after the date of submission of the 'Notice of Intent'.

## STANDARDS

Any standards used by SC should ensure that the requirements given in Art. 6.2. of the CM 30/2015 are satisfied and that a satisfactory preliminary assessment (Art. 7.1) has been conducted. Applying the precautionary approach, SC shall undertake an evaluation of all the submitted material ('Notice of Intent' and relevant accompanying documentation, and the CPs own preliminary assessment) in order to assess the risk of significant adverse impacts. If such risks exist, SC should propose mitigation measures, presumably if the CP proposing the fishing has not already done so. If risks of adverse impacts cannot be eliminated, the proposal should not be recommended for approval.

In its evaluation SC should use the following information:

- 1) The documentation submitted by the CP proposing the exploratory fishing.
- 2) Information from other fisheries in the region or similar fisheries elsewhere.

The submission from a CP should consist of two parts:

- 1) The Notice of Intent with documentation as specified in Art. 6.2. All the elements a) to g) are *required*.
- 2) The CPs preliminary assessment (Art. 7.1) with contents as requested in Annex 3. The annex contains a list of items that the assessment should *inter alia* address, i.e. expresses preferred content while recognising that not all items may be possible to provide.

The following standards reflect the above requirements and specifications, but also the instruction in CM 30/2015 for SC to adopt the precautionary approach. The SC interpretation of precaution in this regard is that if a shortage of information is recognised and hence that uncertainty of the assessment is high, then it is more precautionary to recommend rejection than approval the exploratory fishing. Without fully satisfactory documentation of either that the risk of SAI is low or nonexistent, or that mitigation measures are effective in reducing the risk, approval should not be expected.

***Standards:***

1. A Notice of Intent shall contain all elements specified in CM 30/2015 Art. 6.2, and SC shall determine if the documentation is sufficient to evaluate the risk of significant adverse impacts on VMEs. There are 5 mandatory elements:

- (a) harvesting plan, which outlines target species, proposed dates and areas and the type of bottom fishing gear to be used. Area and effort restrictions shall be considered to ensure that fishing occur on a gradual basis in a limited geographical area;
- (b) mitigation plan, including measures to prevent significant adverse impact to VMEs that may be encountered during the fishery;
- (c) catch monitoring plan, including recording/reporting of all species caught;
- (d) a sufficient system for recording/reporting of catch, detailed to conduct an assessment of activity, if required;
- (e) data collection plan to facilitate the identification of VMEs in the area fished;

Furthermore, the CP should make every effort to also include the following information:

- (f) fine-scale data collection plan on the distribution of intended tows and sets (if appropriate, with reference to Annex 5), to the extent practicable on a tow-by-tow and set-by-set basis;
- (g) plans for monitoring of bottom fishing activities using gear monitoring technology, including cameras if practicable; and
- (h) monitoring data obtained pursuant to paragraph 1 of this Article.

If SC finds that any of the 5 mandatory elements are missing, or found to be described in a manner not permitting evaluation, then the proposal should not be approved.

The harvesting plan needs to comprise effort and effort limitation, also area restrictions, to ensure that the fishing is conducted on a gradual basis. A proposed experiment without such restrictions should not be approved.

In view of the CM 30/2015 instruction to SC to consider mitigation measures (if a risk of SAI exists), the item b) on mitigation is especially important. These would be measures providing additional effectiveness in terms of protection beyond the adherence to the generally applicable mandatory encounter protocol (CM 30/2015, Article 8).

2. The CPs preliminary assessment shall as a minimum demonstrate that every effort has been made to provide the information requested in Art. 7.1, Annex 3. The CP should address individual request point by point in order to facilitate SC evaluation:
  - (a) type(s) of fishing conducted or contemplated, including vessels and gear types, fishing areas, target and potential by catch species, fishing effort levels and duration of fishing (harvesting plan);
  - (b) best available scientific and technical information on the current state of fishery resources and baseline information on the ecosystems, habitats and communities in the fishing area, against which future changes are to be compared;
  - (c) identification, description and mapping (geographical location and extent) of VMEs known or likely to occur in the fishing area;
  - (d) identification, description and evaluation of the occurrence, character, scale and duration of likely impacts, including cumulative impacts of the proposed fishery on VMEs in the fishing area;
  - (e) data and methods used to identify, describe and assess the impacts of the activity, the identification of gaps in knowledge, and an evaluation of uncertainties in the information presented in the assessment;
  - (f) risk assessment of likely impacts by the fishing operations to determine which impacts on VMEs are likely to be significant adverse impacts; and

(g) mitigation and management measures to be used to prevent significant adverse impacts on VMEs and the measures to be used to monitor effects of the fishing operations.

SC shall require that information provided is documented with references to published sources or other sources that SC can access/consult.

If SC deems the contents of the submitted assessment, including the proposed mitigation measures (g), insufficiently rigorous and balanced to assess the risk of SAI, then the proposal shall not be approved.

### 3. Additional elements to be considered prior to SC' final evaluation of SAI.

The final evaluation and decision by SC rest in its judgement of the risk of significant adverse impacts to VMEs, or its judgement of the effectiveness of mitigation measures.

In addition to the information provided by the CP proposing the fishing, SC should consider the following:

- a) Experience for other areas in the region or similar fishing elsewhere.
- b) Potentially cumulative effects of several exploratory fishing experiments in the same or overlapping areas.

Both a) and b) are relevant for evaluating SAI. If it can be documented that relevant experiences from the same experiments elsewhere did not cause SAI, then that would favour approval of the proposed exploratory fishing. On the contrary, if SAIs in other similar areas caused SAI, then approval would be less likely.

If several experiments are proposed for the same area or conducted in succession, then the total effort level of all experiments should be taken into account in the SC evaluation of the likelihood of SAI.

### 4. Transparency of decision-making process and documentation.

SC should keep stakeholders (CPs) fully informed of the process and discussions leading to its recommendation to the Commission.

## APPENDIX V - Landings, discards and bycatch tables - Retained &amp; Discarded TAC species

Table 1: Catches (tons) of Patagonian toothfish (*Dissostichus eleginoides*) by South Africa, Spain, Japan and Korea.

Nation	Spain		Japan				Korea				South Africa			
Fishing method	Longlines		Longlines				Longlines				Longlines			
Management Area	D0		D0		D1		D0		D1		D0		D1	
Catch details (t)	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.
2002	18													
2003	101				47		245	0						
2004	6				124									
2005	N/F	N/F			158		15	0						
2006	11				152		7	0						
2007	N/F		151		15		247	0						
2008	N/F	N/F	19	0	104	0	79	0						
2009	N/F	N/F	82	0	4	0	16	0	46	0	N/F	N/F	N/F	N/F
2010	26	0	41	0	12	2	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2011	N/F	N/F	172	6	N/F	N/F	N/F	N/F	N/F	N/F	15	0	28	0
2012	N/F	N/F	86	3	N/F	N/F	N/F	N/F	N/F	N/F	24	0	12	0
2013	N/F	N/F	41	2	20	1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2014	N/F	N/F	67	6	12	<1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	7	<1	52	<1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	7	<1	53	<1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

N/F = No Fishing.

Blank fields = No data available.

\*Provisional (September 2016).

Ret. = Retained

Disc. = Discarded

Table 2. Catches (tons) of Orange roughy (*Hoplostethus atlanticus*) made by Namibia, Norway and Republic of South Africa.

Nation	Namibia		Norway		South Africa	
Fishing method	Bottom trawl		Bottom trawl		Bottom trawl	
Management Area	B1		A1		B1	
Catch details (t)	Retained	Discarded	Retained	Discarded	Retained	Discarded
1995	40		N/F			
1996	8		N/F			
1997	5		22		27 <sup>***</sup>	
1998	N/F	N/F	12			
1999	<1		N/F	N/F		
2000	75		0			
2001	94		N/F	N/F		
2002	9		N/F	N/F		
2003	27		N/F	N/F		
2004	15		N/F	N/F		
2005	18		N/F	N/F		
2006	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
2012	N/F	N/F	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F

N/F = No Fishing. Blank fields = No data available.

\* Provisional (September 2016).

\*\* Sum of Catches from 1993 to 1997.

#Values taken from the Japp (1999).

Table 3A: Catches (tons) of Alfonsino (*Beryx splendens*) made by various countries.

Flag State	Namibia		Norway		Russia		Portugal		Ukraine		Korea	
Fishing method	Bottom trawl		Bottom trawl		Bottom trawl		Bottom trawl		UNK		Mid-water trawl	
Management Area	B1		A1		UNK		UNK		UNK		B1	
Catch details (t)	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded
1976					252 <sup>#</sup>							
1977					2972 <sup>#</sup>							
1978					125 <sup>#</sup>							
1993									172 <sup>§</sup>			
1994												
1995	1 <sup>#</sup>		N/F	N/F								
1996	368 <sup>#</sup>		N/F	N/F					747 <sup>§</sup>			
1997	208 <sup>#</sup>		836		2800 <sup>#</sup>				392 <sup>§</sup>			
1998	N/F	N/F	1066		69 <sup>§</sup>							
1999	1		N/F	N/F			3 <sup>§</sup>					
2000	<1		242				1 <sup>§</sup>					
2001	1		N/F	N/F			7 <sup>§</sup>					
2002	0		N/F	N/F			1 <sup>§</sup>					
2003	0		N/F	N/F			5 <sup>§</sup>					
2004	6		N/F	N/F	210							
2005	1		N/F	N/F	54							
2006	N/F	N/F	N/F	N/F	N/F	N/F	<1					
2007	N/F	N/F	N/F	N/F	N/F	N/F	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	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	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	N/F	N/F	N/F	N/F	159	0
2011	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	165	0
2012	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	172	0
2013	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	13	0
2014	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

2016*	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
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\* Provisional (September 2016).

N/F = No Fishing. Blank fields = No data available.

UNK = Unknown. # = Values taken from the Japp (1999).  
majority of the catch total.

§ = Values from FAO Two species targeted, however, *Beryx splendens* constitutes



Table 3B: Catches (tons) of Alfonsino (*Beryx spp.*) made by various countries.

Nation	Spain		Poland		Cook Island		Mauritius		Cyprus		South Africa	
Fishing method	Mid-water trawl and Longlines		UNK		Bottom trawl		Bottom trawl		Bottom trawl		Bottom trawl	
Management Area	UNK		UNK		UNK		UNK		UNK		B1	
Catch details (t)	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded
1976												
1977												
1978												
1993												
1994												
1995			1964 <sup>§</sup>								60 <sup>#</sup>	
1996											109 <sup>#</sup>	
1997	186 <sup>§</sup>										124 <sup>#</sup>	
1998	402 <sup>§</sup>											
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	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	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	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	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	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	N/F	N/F	N/F	N/F	N/F
2012	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016).

N/F = No Fishing. Blank fields = No data available. UNK = Unknown.

# = Values taken from the Japp (1999).

§ = Values from FAO

Two species targeted: *Beryx splendens* represents majority of catch.

Table 4: Catches (tons) of Deep-sea red crab (*Chaceon spp.*, considered to be mostly *Chaceon erythrae*).

Nation	Japan		Korea		Namibia		Spain		Portugal	
Fishing method	Pots		Pots		Pots		Pots		Pots	
Management Area	B1		B1		B1		UNK		A	
Catch details (t)	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.
2001			N/F	N/F			<1			
2002			N/F	N/F						
2003			N/F	N/F			5			
2004			N/F	N/F			24			
2005	253	0	N/F	N/F	54					
2006	389		N/F	N/F						
2007	770		N/F	N/F	3	0			35	
2008	39		N/F	N/F						
2009	196		N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2010	200	0	N/F	N/F			N/F			
2011	N/F	N/F	N/F	N/F	175	0	N/F	N/F	N/F	N/F
2012	N/F	N/F	N/F	N/F	198	0	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	196	0	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	135	0	N/F	N/F	N/F	N/F
2015	N/F	N/F	104	0	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016).

Ret. = Retained Disc. = Discarded

N/F = No Fishing.

Blank fields = No data available.

UNK = Unknown.

Table 5a: Catches (tons) of Pelagic armourhead (*Pseudopentaceros richardsoni*).

Nation	Namibia		Russia		Ukraine		South Africa	
Fishing method	Bottom trawl		Bottom trawl		Bottom trawl		Bottom trawl	
Management Area	B1		B1		UNK		B1	
Catch details (t)	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded
1976			108					
1977			1273					
1978			53					
1993			1000		435 <sup>§</sup>			
1994								
1995	8				49		530	
1996	284				281		201	
1997	559				18		12	
1998	N/F							

1999	N/F							
2000	20							
2001	N/F							
2002	N/F							
2003	4							
2004								
2005								
2006								
2007								
2008								
2009	N/F	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	N/F	N/F
2011	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2012	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016).

N/F = No Fishing.

Blank fields = No Data Available.

UNK = Unknown.

§ = Values from FAO

Table 5b: Catches (tons) of Pelagic armourhead (*Pseudopentaceros richardsoni*).

Nation	Spain		Cyprus		Korea	
	Bottom trawl and Longline		Bottom trawl		Mid-water trawl	
Management Area	B1		UNK		B1	
Catch details (t)	Retained	Discarded	Retained	Discarded	Retained	Discarded
1976						
1977						
1978						
1993						
1994						
1995						
1996						
1997						
1998						
1999						

2000						
2001	<1					
2002						
2003	3					
2004	3		22			
2005						
2006						
2007						
2008						
2009	N/F	N/F	N/F	N/F	N/F	N/F
2010	N/F	N/F	N/F	N/F	688	0
2011	N/F	N/F	N/F	N/F	135	0
2012	N/F	N/F	N/F	N/F	152	<1
2013	N/F	N/F	N/F	N/F	13	0
2014	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016).

N/F = No Fishing.

Blank fields = No Data Available.

UNK = Unknown.

§ = Values from FAO

#### Retained & Discarded Bycatch species

Table 6: Catches (tons) of oreo dories (*Alloctytus verucossus*, *Neocyttus rhomboidalis*, *Alloctytus guineensis*). Smooth oreo dories- *Pseudocyttus maculatus*

Nation	Russia		Cyprus		Mauritius		Namibia	
Fishing method	UNK		UNK		UNK		Bottom trawl	
Management Area	UNK		UNK		UNK		UNK	
Catch details (t)	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded
1995							<1	
1996							0	
1997							35	
1998							N/F	N/F
1999							3	
2000							33	
2001							14	
2002							1	
2003							1	
2004	<1		21		25		0	
2005							4	
2006								
2007								
2008								
2009								

2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016).

N/F = No Fishing. Blank fields = No data available. UNK = Unknown.

Table 7: Catches (tons) of Wreckfish (*Polyprion americanus*). (WRF)

<b>Nation</b>	<b>Portugal</b>	
<b>Fishing method</b>	<b>Longlines</b>	
<b>Management Area</b>	<b>A</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>
2004	1	
2005		
2006	6	
2007	9	
2008		
2009	0	0
2010	0	0
2011	0	0
2012	0	0
2013	N/F	N/F
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

N/F = No Fishing. Blank fields = No data available. UNK = Unknown.

Table 8: Catches (tons) of Blackbelly rosefish (*Helicolenus* spp.). (BRF)

<b>Nation</b>	<b>Korea</b>
<b>Fishing method</b>	<b>Mid-water trawl</b>
<b>Management Area</b>	<b>B1</b>

Catch details (t)	Retained	Discarded
2010	161	0
2011	47	0
2012	44	0
2013	4	0
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 9: Catches (tons) of Imperial Blackfish (*Schedophilus ovalis*). (HDV)

Nation	Korea	
Fishing method	Mid-water trawl	
Management Area	B1	
Catch details (t)	Retained	Discarded
2010	24	0
2011	35	0
2012	24	0
2013	<1	0
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 10: Catches (tons) of Silver Scabbardfish (*Lepidotus caudatus*). (SVS)

Nation	Korea	
Fishing method	Mid-water trawl	
Management Area	B1	
Catch details (t)	Retained	Discarded
2010	30	0
2011	15	0
2012	2	0
2013	0	<1
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 11: Catches (tons) of Mackerel (*Scomber japonicus*). (MAZ)

<b>Nation</b>	<b>Korea</b>	
<b>Fishing method</b>	<b>Mid-water trawl</b>	
<b>Management Area</b>	<b>B1</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>
2010	50	0
2011	0	0
2012	0	0
2013	0	0
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 12: Catches (tons) of Cape Horse Mackerel (*Trachurus capensis*). (HMC)

<b>Nation</b>	<b>Korea</b>	
<b>Fishing method</b>	<b>Mid-water trawl</b>	
<b>Management Area</b>	<b>B1</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>
2010	1	0
2011	0	0
2012	0	0
2013	0	0
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 13: Catches (tons) of Cape Bonnetmouth (*Emmelichthys nitidus*). (EMM)

<b>Nation</b>	<b>Korea</b>	
<b>Fishing method</b>	<b>Mid-water trawl</b>	
<b>Management Area</b>	<b>B1</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>
2010	11	0
2011	2	0
2012	<1	0
2013	0	0
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).



Table 14: Catches (tons) of Oilfish (*Ruvettus pretiosus*). (OIL)

<b>Nation</b>	<b>Korea</b>	
<b>Fishing method</b>	<b>Mid-water trawl</b>	
<b>Management Area</b>	<b>B1</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>
2010	5	0
2011	13	0
2012	7	<1
2013	<1	0
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 15: Catches (tons) Gemfish (*Roudiescolar, Promethichthys prometheus*). (PRP)

<b>Nation</b>	<b>Korea</b>	
<b>Fishing method</b>	<b>Mid-water trawl</b>	
<b>Management Area</b>	<b>B1</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>
2010	0	0
2011	0	0
2012	<1	0
2013	0	0
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 16: Catches (tons) of Orange bellowfish (NPR)

<b>Nation</b>	<b>Korea</b>	
<b>Fishing method</b>	<b>Mid-water trawl</b>	
<b>Management Area</b>	<b>B1</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>
2010	0	0

2011	0	0
2012	0	<1
2013	0	<1
2014	N/F	N/F
2015	N/F	N/F
2016*	N/F	N/F

\* Provisional (September 2016).

Table 17: Catches (tons) of Grenadiers nei (*Macrourus* spp.) (GRV)

Nation	Spain				Japan				Korea		South Africa			
Fishing method	Longlines				Longlines				Longlines		Longlines			
Management Area	D0		D1		D0		D1		D0		D0		D1	
Catch details (t)	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded	Retained	Discarded
2009	N/F	N/F	N/F	N/F	0	0	0	6	0	<1	N/F	N/F	N/F	N/F
2010	4	<1	2	0	0	0	0	3	N/F	N/F	N/F	N/F	N/F	N/F
2011	N/F	N/F	N/F	N/F	0	22	0	0	N/F	N/F	0	0	0	0
2012	N/F	N/F	N/F	N/F	0	21	0	0	N/F	N/F	0	3	0	<1
2013	N/F	N/F	N/F	N/F	0	7	0	<1	N/F	N/F	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	0	6	0	<1	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	0	<1	0	2	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	1	1	0	2	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016).

Table 18: Catches (tons) of Blue antimora (*Antimora rostrata*). (ANT)

Nation	Spain				Japan				Korea				South Africa			
Fishing method	Longlines				Longlines				Longlines				Longlines			
Management Area	D0		D1		D0		D1		D0		D1		D0		D1	
Catches (t)	Ret	Dis	Ret	Dis	Ret	Dis	Ret	Dis	Ret	Dis	Ret	Dis	Ret	Dis	Ret	Dis
2009	N/F	N/F	N/F	N/F	0	0	0	5	0	<1	0	<1	N/F	N/F	N/F	N/F
2010	0	<1	0	<1	0	0	0	1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2011	N/F	N/F	N/F	N/F	0	5	0	0	N/F	N/F	N/F	N/F	0	0	0	0
2012	N/F	N/F	N/F	N/F	0	4	0	0	N/F	N/F	N/F	N/F	0	<1	0	<1
2013	N/F	N/F	N/F	N/F	0	<1	0	<1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	0	2	0	<1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	0	<1	0	<1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	0	<1	0	<1	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016).

N/F = No Fishing

Ret = Retained

Dis = Discarded

Table 19: Catches (tons) of Antarctic toothfish (*Dissostichus mawsoni*). (TOA)

Nation	Japan			
Fishing method	Longlines			
Management Area	D0		D1	
Year	Ret..	Disc.	Ret..	Disc.
2014	< 1	0	0	0
2015	0	0	0	0
2016*	0	0	0	0

N/F = No Fishing.

Blank fields = No data available.

\*Provisional (September 2016).

Ret. = Retained

Disc. = Discarded

Table 20: Catches (tons) of King crab (*Lithodidae spp.*, *Lithodes ferox*, *Paralomis formosa*). (KCA, KCF, KCX)

Nation	Spain				Japan				Korea	
Fishing method	Longlines				Longlines				Pots	
Management Area	D0		D1		D0		D1		B1	
Year	Ret	Dis	Ret	Dis	Ret	Dis	Ret	Dis	Ret	Dis
2009	N/F	N/F	N/F	N/F	0	0	0	<1	N/F	N/F
2010	0	<1	0	<1	0	0	0	<1	N/F	N/F
2011	N/F	N/F	N/F	N/F	0	0	N/F	N/F	N/F	N/F
2012	N/F	N/F	N/F	N/F	0	0	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	0	<1	0	<1	N/F	N/F
2014	N/F	N/F	N/F	N/F	0	0	0	0	N/F	N/F
2015	N/F	N/F	N/F	N/F	0	0	0	0	1	0
2016*	N/F	N/F	N/F	N/F	<1	0	0	<1	N/F	N/F

N/F = No Fishing.

Blank fields = No data available.

\*Provisional (September 2016).

Ret. = Retained

Disc. = Discarded

Table 21: Catches (tons) of Sharks (*Selachimorpha spp.*, *Etmopterus lucifer*, *Prionace glauca*). (SKH, ETF, BSH)

Nation	Japan			
Fishing method	Longlines			
Management Area	D0		D1	
Year	Ret	Dis	Ret	Dis
2009	0	<1	0	0
2010	0	0	0	0
2011	0	0	N/F	N/F
2012	0	0	N/F	N/F
2013	0	<1	0	0
2014	0	0	0	0
2015	0	<1	0	0
2016*	0	0	0	0

N/F = No Fishing.

Blank fields = No data available.

\*Provisional (September 2016).

Ret. = Retained

Disc. = Discarded

Table 22: Incidental mortality (seabirds: Black-browed Albatross (*Thalassarche melanophris*)-DIM; Wandering Albatross (*Diomedea exulans*)-DIX; Southern giant Petrel (*Macronectes giganteus*)-MAI; Great Shearwater (*Puffinus gravis*)-PUG)

Nation	Japan			
Fishing method	Longlines			
Management Area	D			
Year	DIM	DIX	MAI	PUG
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0
2012	0	0	0	0
2013	0	0	0	0
2014	1	0	0	2
2015	0	0	0	0
2016*	0	1	1	0

\*Provisional (September 2016).

**APPENDIX VI - Data on catches of VME indicator species within the SEAFO CA**

Tables 23-35 contain data on VME indicators. The listed benthic taxa are not confirmed as VME indicators.

Table 23: Provisional list of benthic invertebrate VME indicator taxa for the SEAFO CA.

Group / Species code	Phylum / Order / Family	Common name
PFR	Porifera (Phylum)	Sponges
GGW	Gorgonacea (Order)	Gorgonian corals
AZN=> AXT (Stylasteridae)	Anthoathecatae (Family)	Hydrocorals
CSS	Scleractinia (Order)	Stony corals
AQZ	Anthipatharia (Order)	Black corals
ZOT	Zoantharia (Order)	Zoanthids
AJZ	Alcyonacea (Order)	Soft corals
NTW	Pennatulacea (Order)	Sea pens
BZN	Bryozoa (Phylum)	Erect bryozoans
CWD	Crinoidea (Class)	Sea lilies
OWP	Ophiuroidea (Class)	Basket stars
SZS	Serpulidae (Family)	Annelida
SSX	Ascidiacea (Class)	Sea squirts
ATX <sup>#</sup>	Ceriantharia (Order)	Tube-dwelling Sea anemones

<sup>#</sup>FAO code changed to Ceriantharia

Table 24: Catches (kg) of Gorgonians (VME indicators) (GGW).

Nation	Japan		Spain	Korea
Management Area	D		D	B
Fishing method	LLS		LLS	Pots
Catch details	Bycatch (kg)		Bycatch (kg)	Bycatch (kg)
	D0	D1		B1
2010	0	0	47.5	N/F
2011	3.8	0	N/F	N/F
2012	30.3	0	N/F	N/F
2013	1.2	0	N/F	N/F
2014	2.34	2.6	N/F	N/F
2015	0	0.35	N/F	11.5
2016*	0.01	9.54	N/F	N/F

\* Provisional (Sep 2016)

N/F = No Fishing. Blank fields = No data available.

Table 25: Catches (kg) of Black corals and thorny corals (VME indicators) (AQZ)

Nation	Japan	Spain	Korea
Management Area	<b>D</b>	<b>D</b>	B1
Fishing method	<b>LLS</b>	<b>LLS</b>	Pots
Catch details	<b>Bycatch (kg)</b>	<b>Bycatch (kg)</b>	Bycatch (kg)
2010	0	4.4	N/F
2011	0	N/F	N/F
2012	0.02	N/F	N/F
2013	0	N/F	0.4
2014	0	N/F	N/F
2015	0	N/F	0.25
2016*	0	0	0

\* Provisional (Sep 2016)

N/F = No Fishing. Blank fields = No data available.

Table 26: Catches (kg) of Scleractinia (VME indicators) (CSS)

Nation	Japan		Spain	Korea
Management Area	<b>D</b>		<b>D</b>	B
Fishing method	<b>LLS</b>		<b>LLS</b>	Pots
Catch details	<b>Bycatch (kg)</b>		<b>Bycatch (kg)</b>	Bycatch (kg)
	<b>D0</b>	<b>D1</b>		B1
2010	0	0	2.2	N/F
2011	15.4	0	N/F	N/F
2012	17.6	0	N/F	N/F
2013	0	0	N/F	N/F
2014	2.8	0.3	N/F	N/F
2015	0	0	N/F	29.5
2016*	0.68	3.88	N/F	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.



Table 27: Catches (kg) of sea pens (VME indicators) (NTW)

Nation	Japan	Spain	Korea
Management Area	<b>D</b>	<b>D</b>	B
Fishing method	<b>LLS</b>	<b>LLS</b>	Pots
Catch details	<b>Bycatch (kg)</b>	<b>Bycatch (kg)</b>	Bycatch (kg)
			<b>B1</b>
2010	0	1.3	N/F
2011	0	N/F	N/F
2012	0.02	N/F	N/F
2013	0	N/F	N/F
2014	0	N/F	N/F
2015	0	N/F	0.05
2016*	0	0	0

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 28: Catches (kg) of sponges (VME indicators) (PFR)

Nation	Japan	Spain	Korea
Management Area	<b>D</b>	<b>D</b>	B
Fishing method	<b>LLS</b>	<b>LLS</b>	Pots
Catch details	<b>Bycatch (kg)</b>	<b>Bycatch (kg)</b>	Bycatch (kg)
			<b>B1</b>
2010	0	29.7	N/F
2011	0	N/F	N/F
2012	0	N/F	N/F
2013	0	N/F	N/F
2014	0	N/F	N/F
2015	0.4	N/F	0.3
2016*	0.84	N/F	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 29: Catches (kg) of Zoanthids (VME indicators) (ZOT)

Nation	Japan	Spain
Management Area	<b>D</b>	D
Fishing method	<b>LLS</b>	LLS
Catch details	<b>Bycatch (kg)</b>	Bycatch (kg)
2010	0	0.3
2011	0	N/F
2012	0	N/F
2013	0	N/F
2014	0	N/F
2015	0	N/F
2016*	0	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 30: Catches (kg) of soft corals (VME indicators) (AJZ)

Nation	Japan	Spain
Management Area	<b>D</b>	D
Fishing method	<b>LLS</b>	LLS
Catch details	<b>Bycatch (kg)</b>	Bycatch (kg)
2010	0	0.3
2011	0	N/F
2012	0	N/F
2013	0	N/F
2014	0	N/F
2015	0	N/F
2016*	0	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 31: Catches (kg) of sea lilies (VME indicators) (CWD)

Nation	Japan	Spain
Management Area	<b>D</b>	D
Fishing method	<b>LLS</b>	LLS
Catch details	<b>Bycatch (kg)</b>	Bycatch (kg)
2010	0	1.0
2011	0	N/F
2012	0.02	N/F
2013	0	N/F
2014	0	N/F
2015	0	N/F
2016*	0	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 32: Catches (kg) of Hydrocorals (VME indicators) (AXT, AZN)

Nation	Japan	Spain
Management Area	<b>D</b>	D
Fishing method	<b>LLS</b>	LLS
Catch details	<b>Bycatch (kg)</b>	Bycatch (kg)
2010	0	0.1
2011	0	N/F
2012	0	N/F
2013	0	N/F
2014	0	N/F
2015	1	N/F
2016*	0.12	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 33: Catches (kg) of Basket stars (VME indicators) (OWP)

.Nation	Japan		Spain	Korea
Management Area	<b>D</b>		<b>D</b>	B
Fishing method	<b>LLS</b>		<b>LLS</b>	Pots
Catch details	<b>Bycatch (kg)</b>		<b>Bycatch (kg)</b>	Bycatch (kg)
	D0	D1		<b>B1</b>
2010	0	0	0	N/F
2011	0	0	N/F	N/F
2012	0	0	N/F	N/F
2013	0	0	N/F	N/F
2014	0.1	0	N/F	N/F
2015	0	4.9	N/F	0.3
2016*	0	0.6	N/F	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 34: Catches (kg) of Sea anemones (ATX).

Nation	Japan		Spain	Korea
Management Area	<b>D</b>		<b>D</b>	B
Fishing method	<b>LLS</b>		<b>LLS</b>	Pots
Catch details	<b>Bycatch (kg)</b>		<b>Bycatch (kg)</b>	<b>Bycatch (kg)</b>
	<b>D0</b>	<b>D1</b>		B1
2010	0	0	0	N/F
2011	0	0	N/F	N/F
2012	0	0	N/F	N/F
2013	0	0	N/F	N/F
2014	0.2	0	N/F	N/F
2015	0	0	N/F	0.7
2016*	0	0	N/F	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

Table 35: Catches (kg) of Gastropoda (GAS)

Nation	Japan		Spain	Korea
Management Area	D		D	B
Fishing method	LLS		LLS	Pots
Catch details	Bycatch (kg)		Bycatch (kg)	Bycatch (kg)
	D0	D1		B1
2010	0	0	0	N/F
2011	0	0	N/F	N/F
2012	0	0	N/F	N/F
2013	0	0	N/F	N/F
2014	0	0	N/F	N/F
2015	0	0	N/F	8.6
2016*	0	0	N/F	N/F

\* Provisional (Sep 2016)

N/F = No Fishing.

There were no recorded encounters in 2016 of individual set bycatches exceeding the current VME threshold values (60kg for corals and 800kg for sponges).

**APPENDIX VII – Stock Status Report – Orange roughy**

**STATUS REPORT**

*Hoplostethus atlanticus*

Common Name: Orange roughy - ORY



**2016**

**Updated 12 October 2016**

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## Description of the fishery

### 1.1 Description of fishing vessels and fishing gear

Exploration for orange roughy first started in South Africa prior to 1994 but emphasis soon shifted to Namibia when an exploratory fishing license was given to a Namibian fishing company to search for commercial deep-water fish species. The fishery expanded, extending their fishing range into SEAFO CA. By 2008, a three year moratorium on orange roughy was enforced in Namibia and the fishery has not been re-opened yet.

Table 1 shows vessels that operated between 1995 and 2005 in the SEAFO CA. These vessels were also involved in the Alfonsino fishery during the same period.

**Table 1:** Orange roughy: Fleet information, SEAFO Division B1.

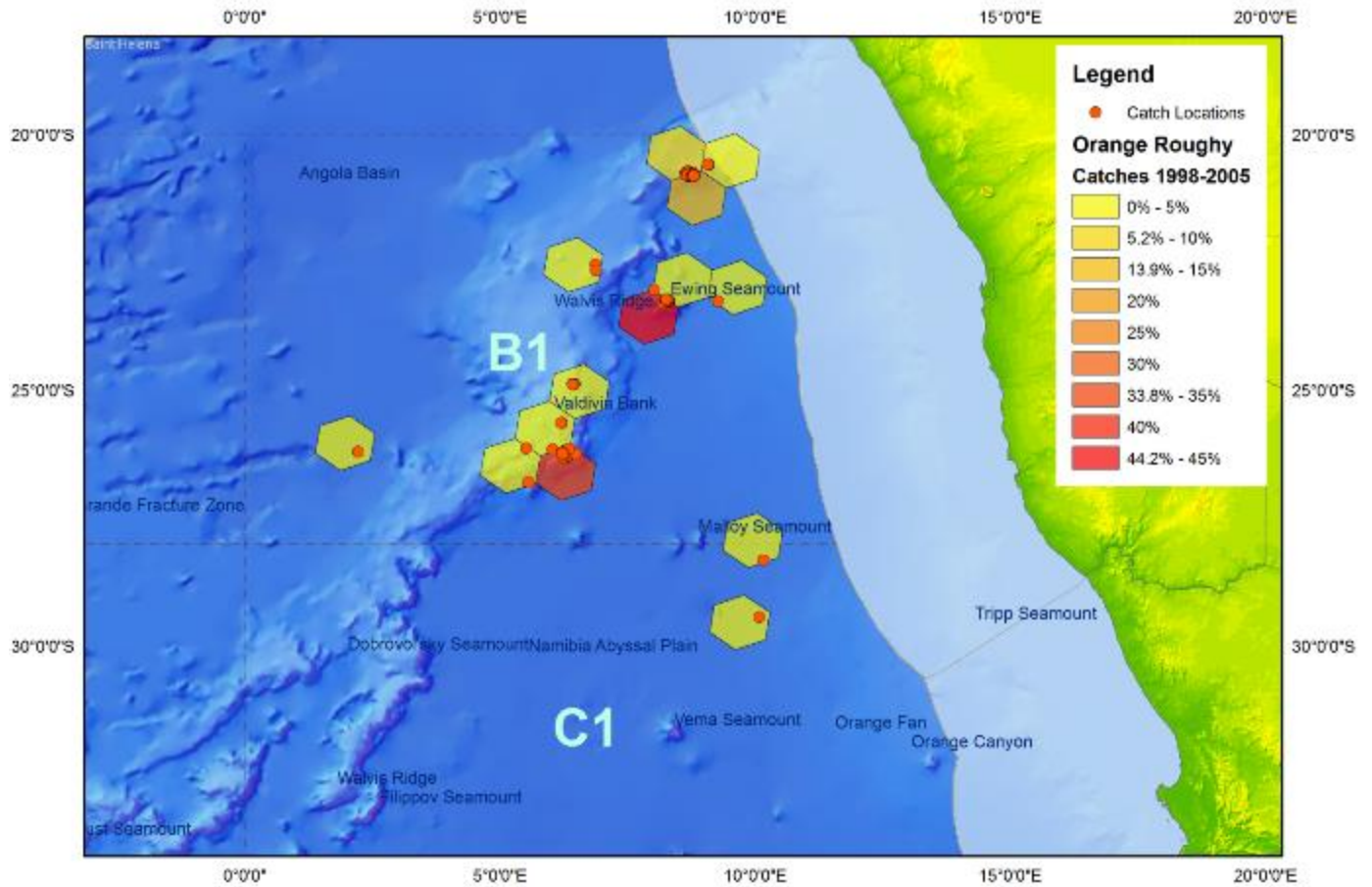
Flag	ID	Name	Length	GRT	Built	HP	IRCS
Nam	L737	Southern Aquarius	54		01/01/1974	3000	V5SH
Nam	L913	Emanguluko	31	483.00	01/01/1990	1850	V5SD
Nam	L892	Petersen	43	650.00	01/01/1979		V5RG
Nam	L861	Will Watch	69	1587.00	01/01/1972	2116	ZMWW
Nam	L918	Hurinis	37	784.00	01/01/1987	1680	V5SW
Maur	L1159	Bell Ocean II	57	1899.00	01/01/1990	3342	3BLG
Nam	L830	Seaflower	92	3179.75	01/01/1972	4800	V5HO

Seven Namibian vessels (Table 1) were involved for the period that the fishery occurred in the SEAFO CA. The vessels employed the standard New Zealand “Arrow” rough bottom trawl with cut-away lower wings. Sweep and bridle lengths were 100 meters and 50 meters respectively. A “rock hopper” bobbin rig was used. The net had a 5-6 meter headline height when towed at 3- 3.5 knots and had an estimated wingspread of 15 meters. The cod end had a mesh of 110 mm. Each vessel spends on average 12 days at sea.

### 1.2 Spatial and temporal distribution of fishing

Fishing mainly occurred on Ewing seamount and Valdivia Bank within the SEAFO CA. These operations started in 1995 and continued until 2005, with the exception of 1998 when no fishing took place. The fishing season usually extends from January to December and catches peak in winter months (May to July), which coincides with the spawning season of orange roughy.





**Figure 1:** Geographical location of fishing activities in the SEAFO CA.

**1.3 Reported retained catches and discards**

For all the fishing grounds the home port is the same as the landing port, with Walvis Bay and Lüderitz the most important ports. All available landing information is presented in Table 2. However, the bulk of orange roughy catches were recorded within the Namibian EEZ (Table 3). A total of 1270 trawls were made landing about 290 tonnes of orange roughy.

**Table 2:** Catches of orange roughy in tonnes made by Namibia, Norway and RSA in the SEAFO CA

<b>Nation</b>	<b>Namibia</b>		<b>Norway</b>		<b>South Africa</b>	
<b>Fishing method</b>	<b>Bottom trawl</b>		<b>Bottom trawl</b>		<b>Bottom trawl</b>	
<b>Management Area</b>	<b>B1</b>		<b>A1</b>		<b>B1</b>	
<b>Catch details (t)</b>	<b>Retained</b>	<b>Discarded</b>	<b>Retained</b>	<b>Discarded</b>	<b>Retained</b>	<b>Discarded</b>
1995	40		N/F		1	
1996	8		N/F		0.04	
1997	5		22		27 <sup>#**</sup>	
1998	N/F	N/F	12			
1999	<1		N/F	N/F		

2000	75		0			
2001	94		N/F	N/F		
2002	9		N/F	N/F		
2003	27		N/F	N/F		
2004	15		N/F	N/F		
2005	18		N/F	N/F		
2006	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
2012	N/F	N/F	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	N/F	N/F
2014*	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F
2016	N/F	N/F	N/F	N/F	N/F	N/F

N/F = No Fishing. Blank fields = No data available.

\* Provisional (Aug 2014)

\*\* Sum of Catches from 1993 to 1997.

# Values taken from the Japp (1999).

**Table 3:** Orange roughy landings (tonnes) in SEAFO CA and Namibian EEZ

<b>Year</b>	<b>SEAFO CA</b>	<b>Namibian EEZ</b>
1994	N/F	1 872
1995	40	6 288
1996	8	17 381
1997	5	14 729
1998	N/F	10 040
1999	<1	2 699
2000	75	1 344
2001	94	874
2002	9	1 985
2003	27	1 730
2004	15	1 106
2005	18	297
2006	N/F	429
2007	N/F	288
2008	N/F	N/F
2009	N/F	N/F
2010	N/F	N/F

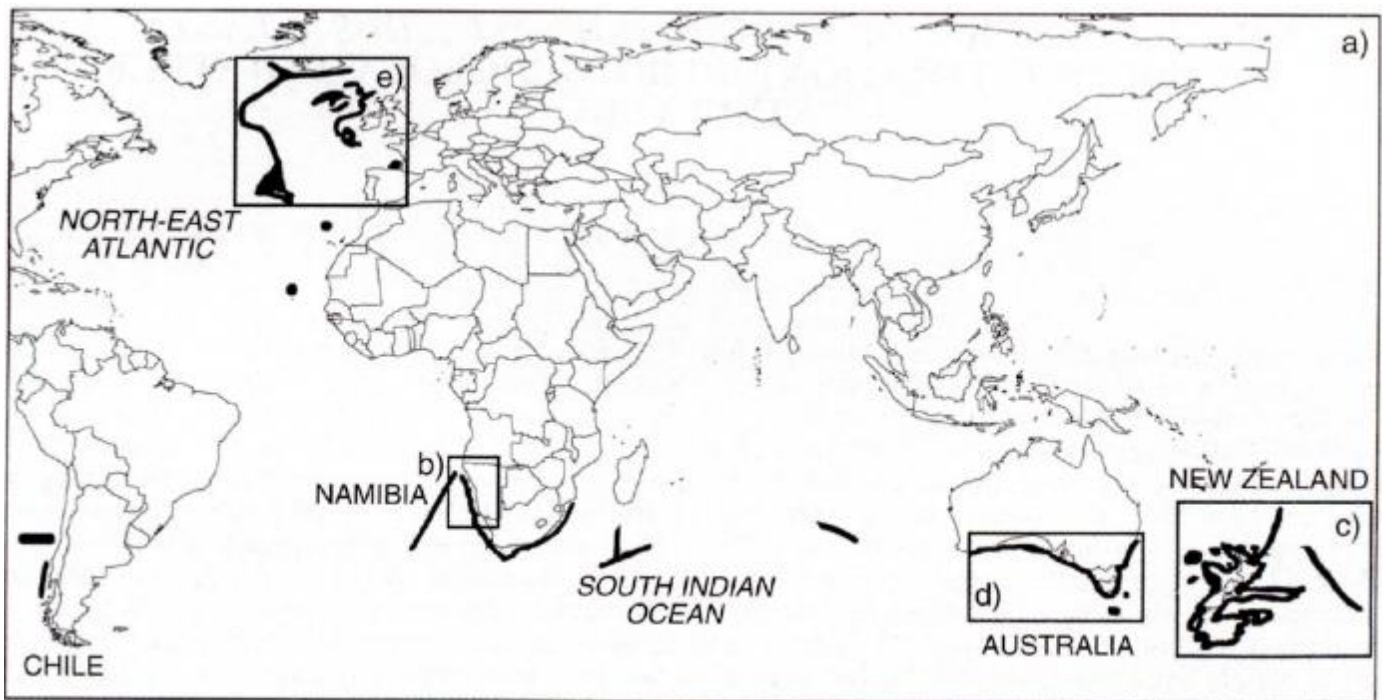
2011	N/F	N/F
2012	N/F	N/F
2013	N/F	N/F
2014	N/F	N/F
2015	N/F	N/F
2016	N/F	N/F

#### 1.4 Illegal, unreported and unregulated (IUU) catch

IUU fishing activity in the SEAFO CA has been reported to the Secretariat latest in 2012, but the extent of IUU fishing is at present unknown.

#### Stock distribution and identity

Orange roughy (*Hoplostethus atlanticus*) is distributed globally (Fig. 3), but predominantly in the Southern Hemisphere. In the SE Atlantic orange roughy may most probably be regarded as a single stock (management unit). In the BCLME region the species occurs within the economic zones of each of the coastal states as well as in the SEAFO CA.



**Figure 3:** Global orange roughy distribution (Branch 2001).

The aggregating behaviour of orange roughy contributed to its vulnerability to overexploitation globally. Spawning aggregations of orange roughy have been targeted in Namibia during winter. Outside the spawning seasons catches were found to be lower due to a more dispersed resource. Orange roughy are also extremely slow-growing and estimates of maximum age are in excess of 100 years.

Recruitment to the fishery is poorly understood as juveniles are not found in significant quantities. Adults have been caught in small amounts in both Angolan and South African waters, but not in large spawning

aggregations as in Namibia. Orange roughy distribution also extends beyond the economic zones of the BCLME countries with good catches reported for example on the Valdivia Bank on the South Atlantic Ridge as well as on the fringes of the Agulhas Bank and Walvis Ridge in the southern Benguela.

### **Data available for assessment, life history parameters and other population information Fisheries and survey data**

Catch records for the period 1995 to 2005 are available (see Table 2 above). The number of trawls made per year are depicted in table 4 and shows that more hauls were recorded in years when the catches were high.

Deep see fish surveys were conducted in the SEAFO CA by the Norwegian vessel, Dr Fridjof Nansen and by the Spanish vessel.

**Table 4:** Number of trawls observed per year

Year	Number of trawls
1995	20
1996	223
1997	188
1998	0
1999	16
2000	327
2001	295
2002	40
2003	63
2004	46
2005	61

### **Length data and frequencies distribution**

No information available for SEAFO CA.

### **Length-weight relationships**

No information available for SEAFO CA.

### **Age data and growth parameters**

No information available for SEAFO CA.

### **Reproductive parameters**

No information available for SEAFO CA.

### **Natural mortality**

No information available for SEAFO CA.

### **Feeding and trophic relationships (including species interaction)**

No information available for SEAFO CA.

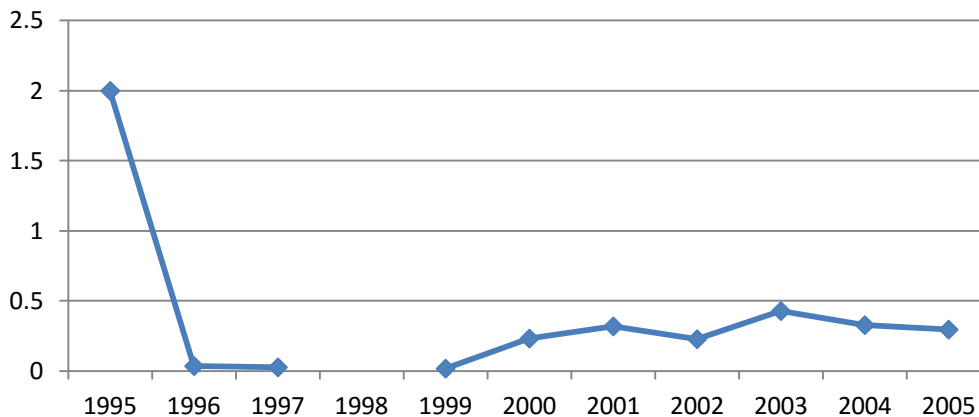
### **Tagging and migration**

No information available for SEAFO CA.

### Stock assessment

Available abundance indices and estimates of biomass

The annual CPUE (total annual catch divided by number of trawls) are shown in figure 4. The CPUE was the highest in 1995 and thereafter decreased rapidly to reach the lowest CPUE in 1999. Since then the CPUE seems to have stabilized at a low level until 2005 after which there are no data. It has not been confirmed that this CPUE index reflects stock abundance for a highly aggregating species like orange roughy.



**Figure 4:** CPUE of orange roughy in tonnes per trawl in Division B1 (SEAFO SC Report 2006).

### Data used

No data since 2005 available.

### Methods used

No data since 2005 available.

### Conclusion

Since there has been no fishery in recent years or no other fishery independent data available within the SEAFO CA, no assessment can be done at the moment.

### Biological reference points and harvest control rules

No biological reference points and/or harvest control rules have been established for this stock as yet.

### Incidental mortality and bycatch of fish and invertebrates

Incidental and bycatch statistics (seabirds, mammals and turtles)

No information available for the SEAFO CA.

### Fish bycatch

Some of the bycatch species recorded are: Alfonsino (*Beryx splendens*), Black Oreo Dory (*Allocyttus niger*), Pelagic armourhead (*Pseudopentaceros richardsoni*), Black Cardinal fish (*Epigonus telescopus*), Smooth Oreo Dory (*Pseudocyttus maculatus*), Warty Oreo Dory (*Allocyttus verrucosus*) and various deep sea shark species.

### Invertebrate bycatch including VME taxa

No information available for the SEAFO CA.

**Incidental mortality and bycatch mitigation methods**

No information available for the SEAFO CA.

**Lost and abandoned gear**

No lost and abandoned gear data was reported for orange roughy fishery in the SEAFO CA.

**Ecosystem implications and effects**

No Information available for the SEAFO CA

**Current conservation measures and management advice****Current conservation measures**

The 2016 management measure pertaining to orange roughy in the SEAFO CA (CM 31/15) has zero tonnes (moratorium on directed fishery) and a 4 tonnes bycatch allowance in Division B1, and 50 tonnes in the remainder of the SEAFO CA;

**Table 5:** Conservation measure relevant to orange roughy fishery

Conservation Measure 04/06	On the Conservation of Sharks Caught in Association with Fisheries Managed by SEAFO
Conservation Measure 14/09	To Reduce Sea Turtle Mortality in SEAFO Fishing Operations.
Conservation Measure 25/12	On Reducing Incidental Bycatch of Seabirds in the SEAFO Convention Area
Conservation Measure 30/15	On the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area
Conservation Measure 31/15	On Total Allowable Catches and related conditions for Patagonian Toothfish, orange roughy, Alfonsino and Deep-Sea Red Crab in the SEAFO Convention Area in 2014

**Management advice**

SC considered available data on orange roughy since the inception of the fisheries in SEAFO CA.

There is no fishery data available since 2005 for orange roughy within the SEAFO CA, as a result SC cannot conduct stock assessment of the orange roughy stock within the Convention Area.

SC recommends a moratorium for 2017 and 2018 on directed fishery in Division B1 and allowance for bycatch limit as proportion (10%) of the average of landings from the last five years with positive catches (i.e. 2001-2005), equivalent to 4 tonnes.

The SC did not consider the allowance of a 50 tonnes TAC in the remainder of the area and cannot review the current status quo, due to a lack of new information.

A harvest control rule shall be developed for orange roughy in the future as data becomes available.

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**APPENDIX VIII – Stock Status Report – Deep-sea Red crab**

**STATUS REPORT**

*Chaceon erytheiae*

Common Name: Deep-sea red crab

FAO-ASFIS Code: GER



**2016**  
**Updated 14 October 2016**



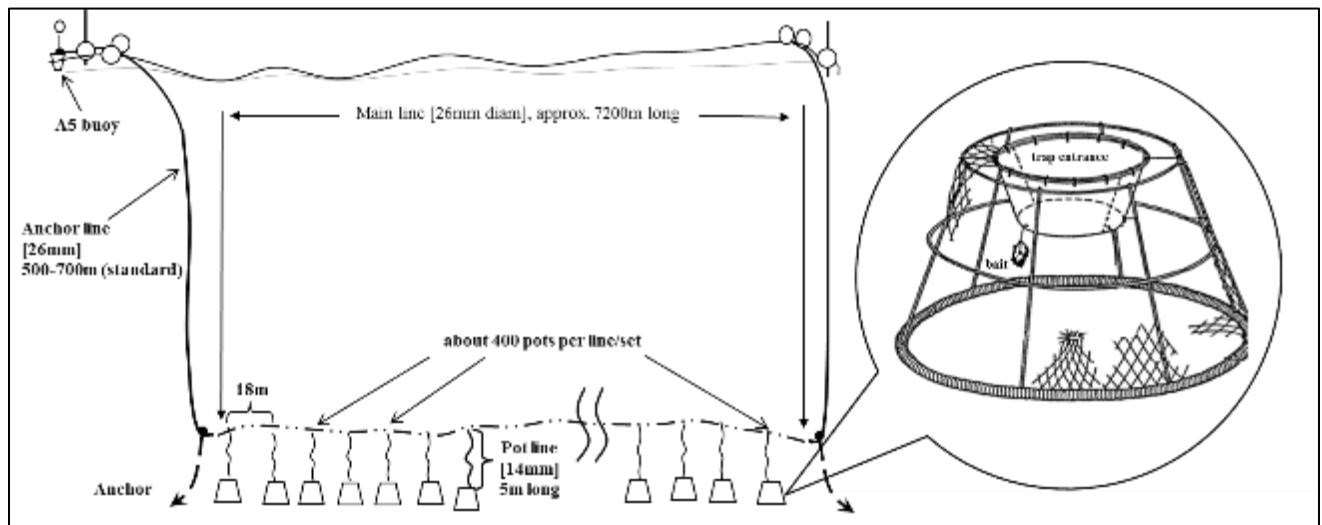
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## 1. Description of the fishery

### 1.1 Description of fishing vessels and fishing gear

There was no fishery in 2016, hence no new catch or effort data are available. In 2015 only one Korean flagged vessel fished deep-sea red crab (DSRC) in the SEAFO CA. The gear setup (set deployment & design) were very similar and known as Japanese beehive pots (Fig. 1). The beehive pots are conical metal frames covered in fishing net with an inlet shoot (trap entrance – Fig. 1) on the upper side of the structure and a catch retention bag on its underside. When settled on the seabed the upper side of the trap are roughly 50cm above the ground ensuring easy access to the entrance of the trap. The trap entrance leads to the kitchen area of the trap – which is sealed off by a plastic shoot that ensures all crabs end up in the bottom of the trap.



9.4 9.5  
**Figure 1:** Deep-sea red crab fishing gear setup (set deployment and design) and illustration of a Japanese beehive pot (shown in enlarged form on the right).

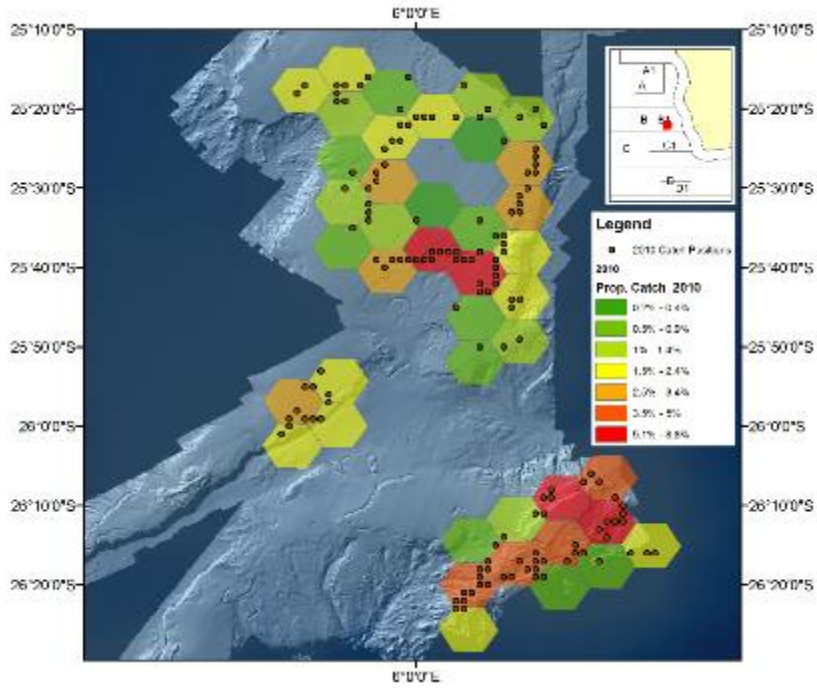
One set or pot line consists of about 200-400 beehive pots, spaced roughly 18m apart, on a float line attached to two (start & end) anchors for keeping the gear in place on the seabed (Fig. 1). The start & end points of a set are clearly marked on the surface of the water with floats and one A5 buoy that denotes the start of a line. Under this setup (i.e. 400pots at 18m intervals) one crab fishing line covers a distance of roughly 7.2km (3.9nm) on the sea floor and sea surface.

### 1.2 Spatial and temporal distribution of fishing

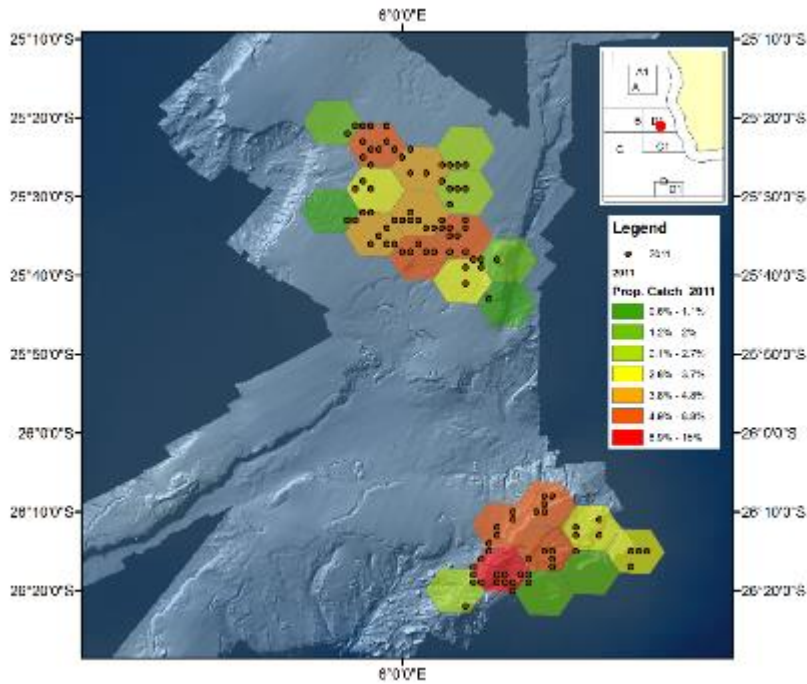
In the SEAFO Convention Area fishing for deep-sea red crab has traditionally been focussed mainly on *Chaceon erythrae* on Valdivia seamount complex – a fairly extensive sub-area of the Walvis Ridge (Fig. 2-7). This fishing area is located in Division B1 of the SEAFO CA and has been the main fishing area of the crab fishery since 2005 when the resource was accessed by Japan. Records from the SEAFO database indicate that fishing for crab in this area occurred over a depth range of 280-1150m.

**Table 1:** The total number of sets from which deep-sea red crab catches were derived for the period 2010-2015.

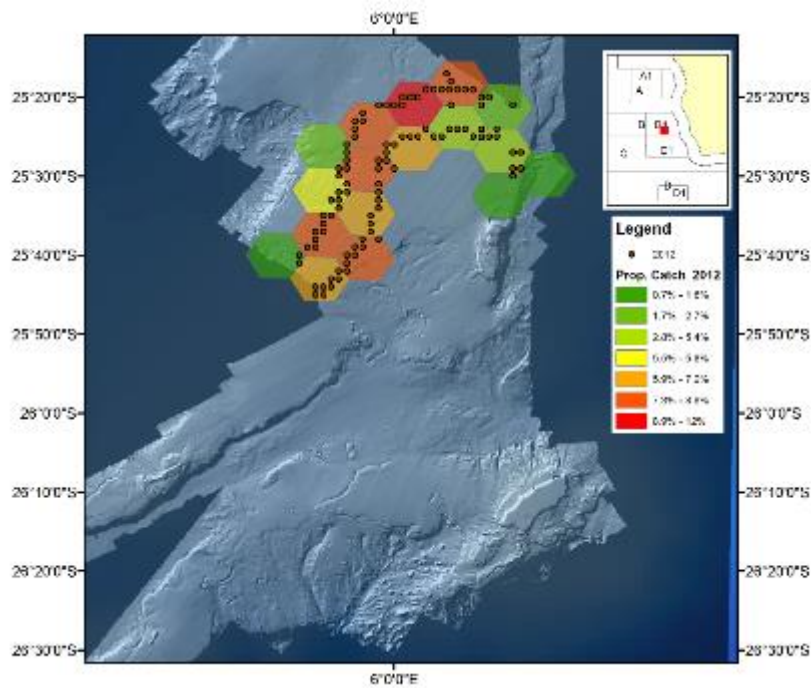
2010	2011	2012	2013	2014	2015
181	133	129	103	107	73



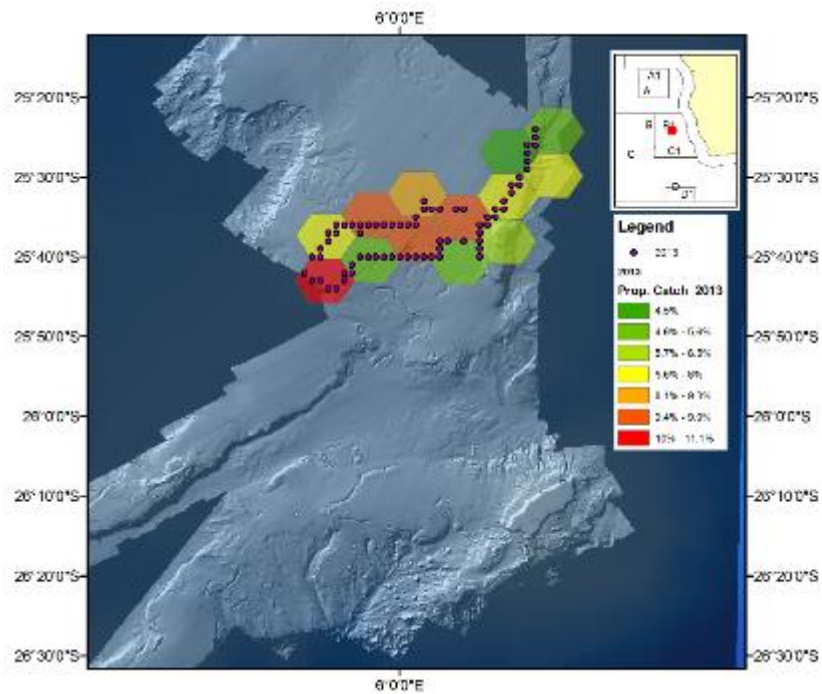
**Figure 2:** The 2010 catch distributions for deep-sea red crab in Division B1 aggregated to a 10 km<sup>2</sup> hexagonal area.



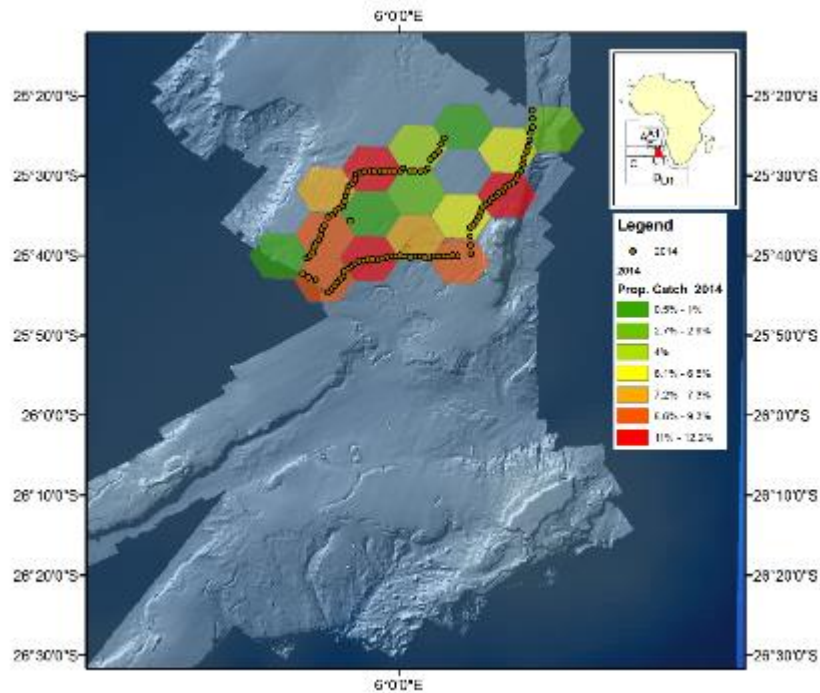
**Figure 3:** The 2011 catch distributions for deep-sea red crab in Division B1 aggregated to a 10 km<sup>2</sup> hexagonal area.



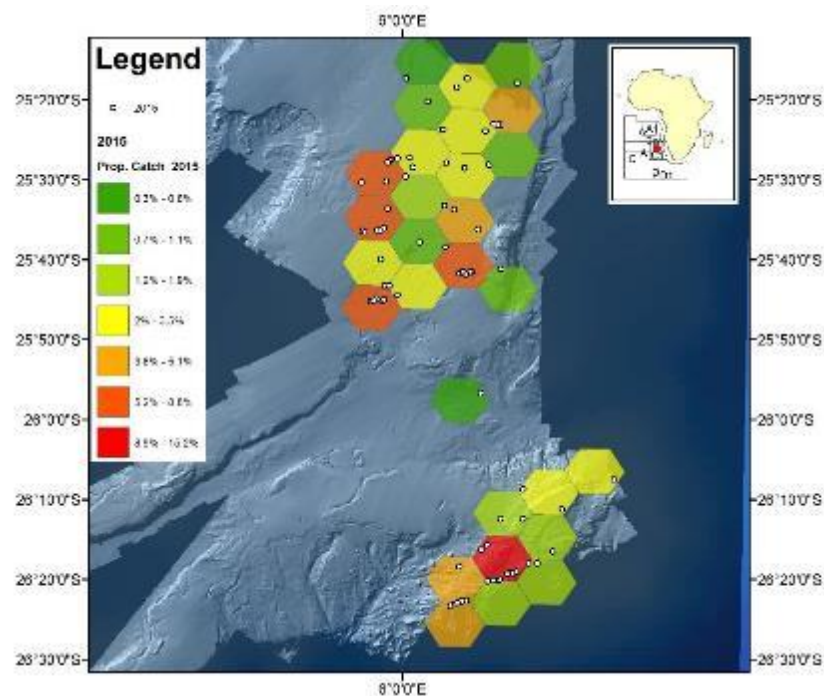
**Figure 4:** The 2012 catch distributions for deep-sea red crab in Division B1 aggregated to a 10 km<sup>2</sup> hexagonal area.



**Figure 5:** The 2013 catch distributions for deep-sea red crab in Division B1 aggregated to a 10 km<sup>2</sup> hexagonal area.



**Figure 6:** The 2014 catch distributions for deep-sea red crab in Division B1 aggregated to a 10 km<sup>2</sup> hexagonal area.



**Figure 7:** The 2015 catch distributions for deep-sea red crab in Division B1 aggregated to a 10 km<sup>2</sup> hexagonal area.

### 1.3 Reported landings and discards

In 2015 only a Korean vessel reported landings and in 2016 there was no fishing. Reported landings (Table 2) comprise catches made by Japanese, Namibian, Spanish, Portuguese and Korean-flagged vessels over the period 2001-2015. As is evident from Table 2, the two main players in the SEAFO crab fishery were Japan and Namibia, respectively, with Spanish and Portuguese vessels having only sporadically fished for crab in the SEAFO CA over the period 2003 to 2007. Spanish-flagged vessels actively fished for crab in

the SEAFO CA during 2003 and 2004, whereas Portuguese-flagged vessels only fished for crab once during the 2007 season (Table 2).

**Table 2:** Catches (tonnes) of deep-sea red crab (*Chaceon spp.* – considered to be mostly *Chaceon erytheiae*).

Nation	Japan		Korea		Namibia		Spain		Portugal	
Fishing method	Pots		Pots		Pots		Pots		Pots	
Management Area	B1		B1		B1		UNK		A	
Catch details (t)	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.	Ret.	Disc.
2001			N/F	N/F			<1			
2002			N/F	N/F						
2003			N/F	N/F			5			
2004			N/F	N/F			24			
2005	253	0	N/F	N/F	54					
2006	389		N/F	N/F						
2007	770		N/F	N/F	3	0			35	
2008	39		N/F	N/F						
2009	196		N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
2010	200	0	N/F	N/F			N/F			
2011	N/F	N/F	N/F	N/F	175	0	N/F	N/F	N/F	N/F
2012	N/F	N/F	N/F	N/F	198	0	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	196	0	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	135	0	N/F	N/F	N/F	N/F
2015	N/F	N/F	104	0	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

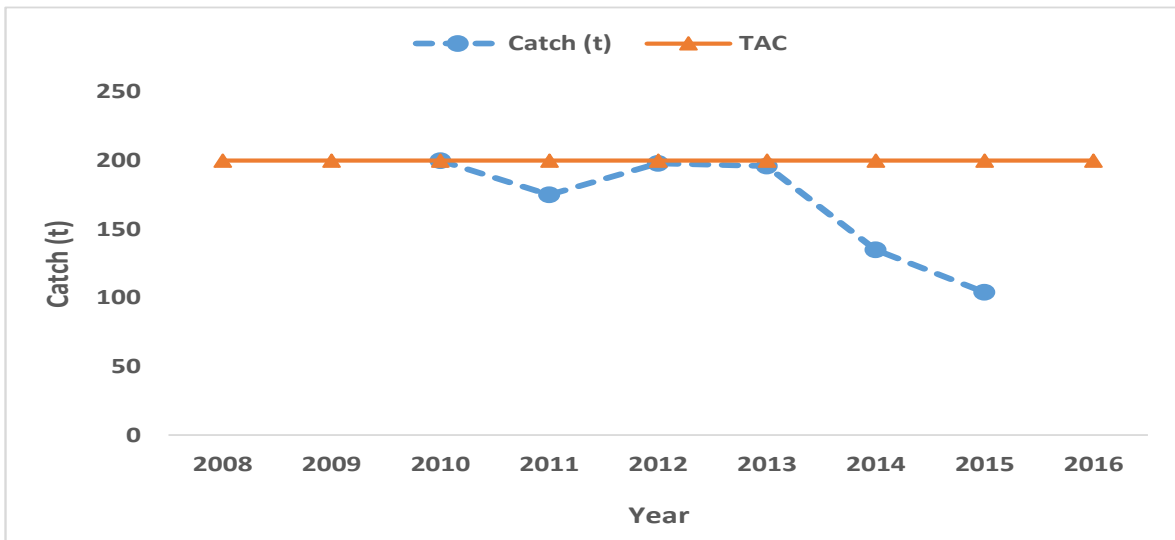
\* Provisional (September 2016) Ret. = Retained Disc. = Discarded

N/F = No Fishing.

Blank fields = No data available.

UNK = Unknown.

Being a pot fishery, the deep-sea red crab fishery has an almost negligible bycatch impact. To date only 5kg of teleost fish discards have been recorded, during 2010, from this fishery. As of 2010, however, minimal to moderate bycatches of king crabs have also been recorded from this fishery (see Section 5.3 for additional information).



**Figure 8:** Annual catches in relation to TAC for Deep-Sea Red Crab in Division B1. No catches were taken elsewhere in the SEAFO CA.

#### 1.4 IUU catch

IUU fishing activity in the SEAFO CA has been reported to the Secretariat latest in 2012, after which no IUU fishing was reported.

## 2. Stock distribution and identity

One species of deep-sea red crab has been recorded in Division B1, namely *Chaceon erytheiae* (López-Abellán *et al.* 2008), and is thus considered the target species of this fishery. Aside from the areas recorded in catch records the overall distribution of *Chaceon erytheiae* within the SEAFO CA is still unknown. Further encounter records documented through video footage during the 2015 FAO-Nansen VME survey (FAO, 2016) in the SEAFO CA indicate that deep-sea red crab are distributed across a major part of the Valdivia seamount range, as well as the Ewing and Vema seamounts (DOC/SC/22/2015).

Preliminary results from genetics studies, based on Mitochondrial DNA, indicate that the deep-sea red crab targeted by the pot fishery on the Valdivia Bank is confirmed as *C. erytheiae* (López-Abellán *pers. comm.*).

## 3. Data available for assessments, life history parameters and other population information

### 3.1 Fisheries and surveys data

Fishery-dependent data exist only for more recent years (2010-2015) of the SEAFO deep-sea red crab fishery (Fig. 8). Samples were collected from the fishery (Table 3). Data collected comprise gender-specific length-frequency, weight-at-length, female maturity and berry state data.

**Table3:** Illustration of sampling frequencies (2010-2015) from the deep-sea red crab commercial fleet within the SEAFO CA.

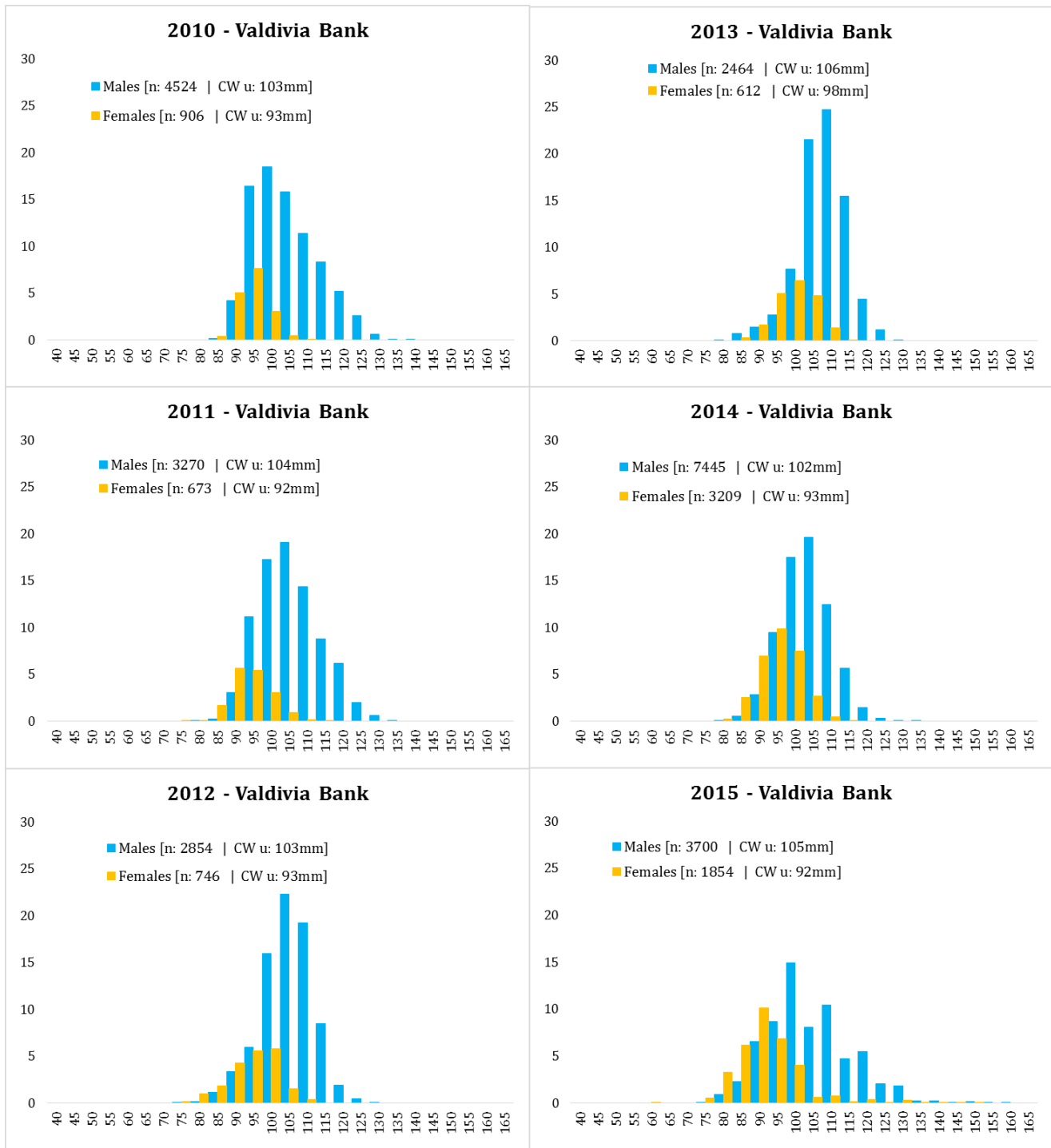
	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Total Number of Sets</b>	181	133	120	103	107	74
<b>Crabs Sampled per Set</b>	30	30	30	30	100	136
<b>Total Crabs Sampled</b>	5430	3990	3600	3077	10654	32500

Very limited fisheries-independent data on deep-sea red crabs exists for the SEAFO CA. A total of 479 deep-sea red crabs were sampled during the 2008 Spanish-Namibia survey on Valdivia Bank. The data was collected over a depth range of 867-1660m. Additionally 127 deep-sea red crab samples were collected onboard the *RV Fridtjof Nansen* (FAO, 2016) during the SEAFO VME mapping survey conducted at the start of 2015.

### *3.2 Length data and frequency distribution*

Available length-frequency data for crabs caught in the SEAFO CA over the period 2010-2015 are presented in Figure 9. Length-frequency data from all areas sampled in Division B1 were pooled as no significant differences were detected between areas.



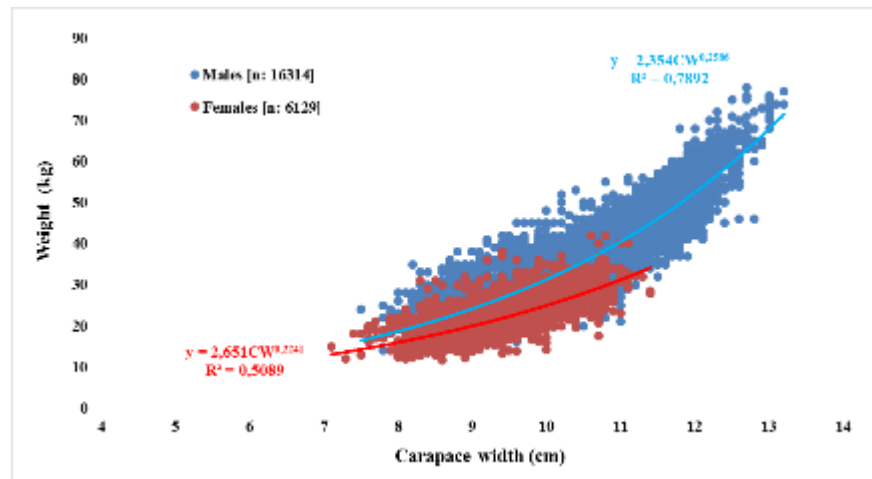


**Figure 9:** Carapace width (mm) frequencies (in percentages) of crabs sampled from commercial catches [2010-2015]. Notes: “n” refers to sample size; “u” refers to the carapace width arithmetic mean for each sample as indicated.

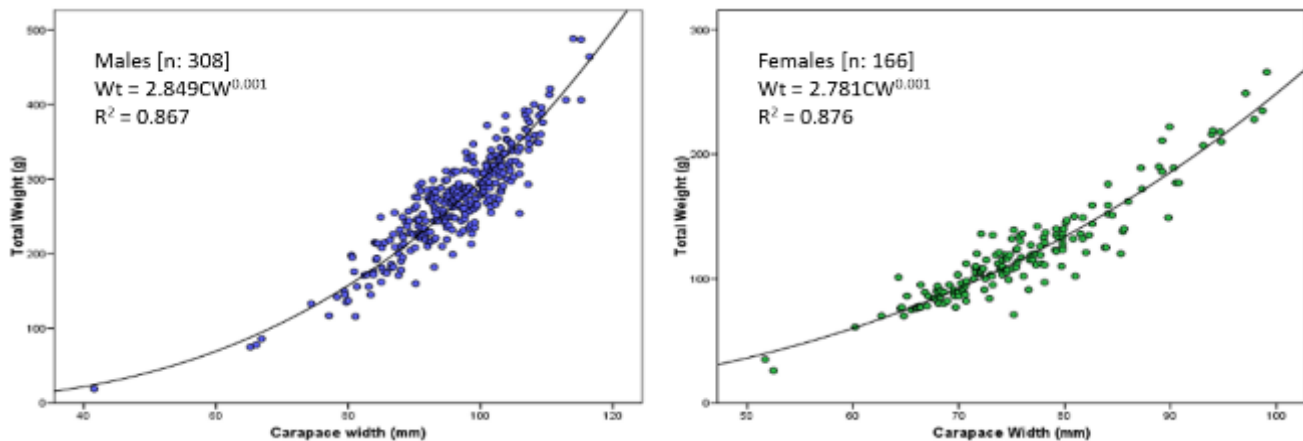
For the period 2010-2014 there have been no significant changes in the female crab size distribution (Fig. 9). The male crab size distribution changed from a wider size distribution in 2010 and 2011, where larger male crabs were recorded, to a slightly narrowed size distribution in 2012-2014 of smaller crabs. During 2015 a lot more female crabs larger than 110mm were recorded than any preceding years since 2010 (Fig. 9). Sex ratio from crab commercial samples fluctuated around 4:1 in favour of male crabs – a well-known bias of the commercial traps used in this fishery.

### 3.3 Length-weight relationships

Length-weight relationship derived from catches on Valdivia Bank reveal the length-weight disparity (Fig. 10). Male crabs attain much larger sizes than female crabs. This species attribute, however, is not unique to *Chaceon erytheiae* and has been recorded for other crab species in the *Chaceon* genus (Le Roux 1997). Data from the 2008 survey show a much more coherent length-weight relation for both male and female crabs (Fig. 11).



**Figure 10:** Length-at-weight data for *Chaceon erytheiae* as recorded from catches on Valdivia Bank (2008-2015). Red text show female length-weight relationship, blue text show male length-weight relationship.



**Figure 11:** Length-at-weight data for *Chaceon erytheiae* as recorded from the 2008 Spain-Namibia survey (López-Abellán *et al.* 2008).

### 3.4 Age data and growth parameters

No information exists on the age and growth attributes of *Chaceon erytheiae*.

### 3.5 Reproductive parameters

Very limited reproductive data exist for *Chaceon erytheiae* from commercial samples. This dataset constitute female maturity and berry data collected during 2010-2015. However, the mating and spawning seasons for *C. erytheiae* within the SEAFO CA are still unknown.

### 3.6 Natural mortality

No natural mortality data exist for *Chaceon erytheiae*.

### 3.7 Feeding and trophic relationships (including species interaction)

No data exist for *Chaceon erytheiae*.

### 3.8 Tagging and migration

No data on migration exist for *Chaceon erytheiae* in the SEAFO CA.

## 4. Stock assessment status

Since there has been no fishing or sampling in 2016, and the time series of data has now been interrupted, the SC could not update the stock status. The following text section 4.1 - 4.7 is the same as provided in 2015.

### 4.1 Available abundance indices and estimates of biomass

Currently the only data available for the assessment for *C. erytheiae* abundance within the SEAFO CA are the catch and effort data from which a limited catch-per-unit effort (CPUE) series from 2005-2015 can be constructed.

### 4.2 Data used

The available SEAFO data (2005-2015) for purposes of considering possible assessment strategies are presented in Table 4.

**Table 4:** Description of the entire deep-sea red crab database highlighting important datasets.

Year	Flag State	Data Type - Source	Brief Description [NB Data Groups only]
2005	JPN	Catch Data – Observer Report	Set-by-Set data (vessel ID, set-haul positions & dates), Depth, Catch, Effort - (157 records).
2007	NAM	Catch Data – Observer Report	Set-by-Set data (vessel ID, set-haul positions & dates), Depth, Catch, Effort - (10 records - sets).
2010	JPN	Catch & Biological Data – Observer Report	Set data (vessel ID, set-haul positions & dates), Depth, Length, Weight, Catch, Effort - (Catch: 181 records, Biological: 5430 records).
2011	NAM	Catch & Biol. Data – Observer Report	Set-by-Set data (vessel ID, set-haul positions & dates), Depth, Length, Weight, Catch, Effort - (Catch: 133 records, Biological: 3990 records).
2012	NAM	Catch & Biol. Data – Obs. Report & Captain’s Logbook [log sheet data]	Set-by-Set data (vessel ID, set-haul positions & dates), Depth, Length, Weight, Catch, Effort - (Catch: 129 records, Biological: 3600 records).
2013	NAM	Catch Data – Captain’s Logbook [log sheet data]	Set-by-Set data (vessel ID, set-haul positions & dates), Depth, Catch, Effort - (Catch: 103 records, Biological: 3090 records).
2014	NAM	Catch Data – Captain’s Logbook [log sheet data]	Set-by-Set data (vessel ID, set-haul positions and dates), Depth, Length, Weight, Catch, Effort – (Catch: 107 records, Biological: 10660 records)
2015	KOR	Catch Data – Fishing Logbook data	Set-by-Set data (vessel ID, set-haul positions and dates), Depth, Length, Weight, Catch, Effort – (Catch: 73 records, Biological: 5554 records)

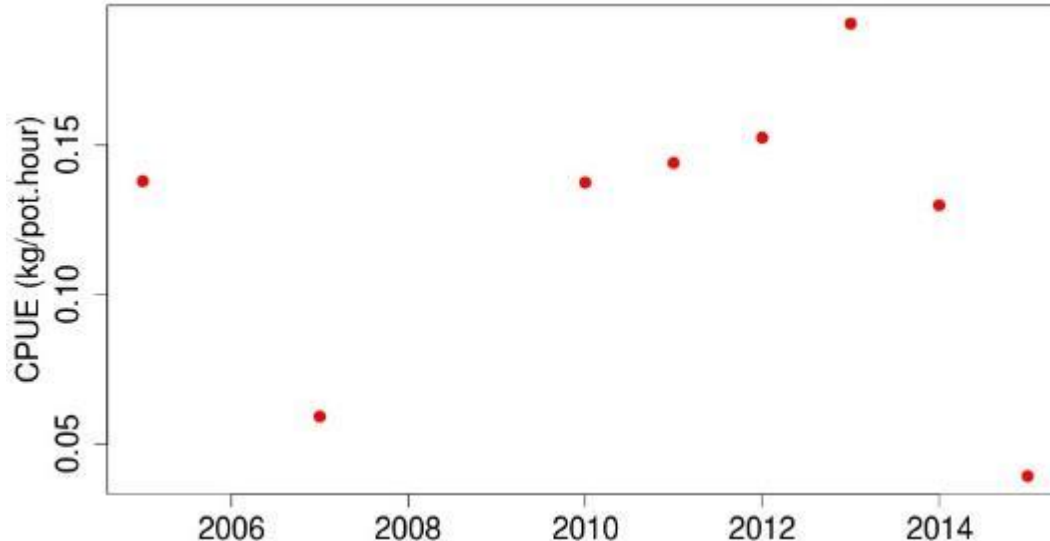
### 4.3 Methods used

#### CPUE Standardization:

As part of the annual updating of the deep-sea red crab abundance index another attempt was made during 2015 at standardizing the CPUE index. With the agreement made in 2014 to use all available catch and effort data in the CPUE model, a problem was encountered with the soak time data recorded during 2015. Prior to 2015 the duration of time for which baited crab pots were left in the water during fishing operations (i.e. soaking time of baited crab pots), ranged between 11.7 and 99.5 hours with a mean of 25.1 hours (Table 5). However, during 2015 the soak time of baited traps during fishing operations changed drastically to a range of 93.7 and 233.5 hours with a mean of 120.8 hours. Out of the 73 sets recorded for 2015 only one set had a soak time of 93.5 hours, while 88% of the sets had soak times ranging between 100 and 117 hours; and the remaining 11% recorded soak times greater than 200 hours. This increase in the soak time during 2015 greatly reduces the annual CPUE when compared with other years as illustrated in Figure 12.

**Table5:** Comparison of “Soak Time” in hours as reported from the deep-sea red crab fishery for the period 2010 to 2015.

	2010-2014	2015
<b>Minimum</b>	11.7	93.7
<b>1<sup>st</sup> Quantile</b>	22.3	105.0
<b>Median</b>	23.0	108.3
<b>Mean</b>	25.1	120.8
<b>3<sup>rd</sup> Quantile</b>	23.6	113.5
<b>Maximum</b>	99.5	233.5



**Figure 12:** Nominal CPUE (base on “Soak Time”) from the SEAFO deep-sea red fishery for the period 2005 to 2015.

To solve this problem one option would be to keep the range of soak times the same as that recorded during the pre-2015 years, which means removing all sets with soak times greater than 100 hours from the 2015 dataset. This option, however, was not feasible as it would mean removing 99% of the 2015 CPUE data – since all but one set had a soak time less than 100 hours. The second option was to define a normal distribution of soak times on the average soak time for which bait used in the fishery remains viable (i.e. the average amount of time bait remains in the trap before being consumed and/or disintegrating). From other crustacean fisheries it is known that bait usually only last for roughly 24 hours, and thus the defined soak time distribution would be similar to that recorded from the SEAFO crab fishery during the pre-2015

years. The final option was to exclude soak time from the calculation of CPUE, and to only consider the number of pots used during fishing operations. This was the approach used during the 2015 standardization of the annual CPUE from the SEAFO deep-sea red crab fishery.

**Table 6:** Description of the sets for which catch and effort data are available for the CPUE standardization.

2005	2007	2010	2011	2012	2013	2014	2015
157	10	181	133	129	103	107	73

The records from 2007 were excluded from the analysis as they were derived from an area not exploited in the remaining years and, constituting only 10 sets, were not comparable to datasets from the rest of the data series.

The following variables from each record were considered in the model:

- Year - A 12-month period – explanatory variable (covariate).
- Semester - A calendar semester in a fishing year – explanatory variable (covariate).
- VesselID - Identification code for a participating vessel – explanatory variable (covariate).
- Zone - Identification code for a fishing area – explanatory variable (covariate). Co-ordinates were categorized into three smaller fishing zones reflecting the fishing records within Division B1.
- Depth - Fishing depth – explanatory variable (covariate). Depth was categorized into 50 metre intervals covering the entire range of depths recorded by the fishery.
- Pots - The number of baited pots used per set during fishing operations – explanatory variable (covariate).
- CPUE - Catch/number of pots – response variable.

#### 4.4 Results

Results from the CPUE standardization are presented below to illustrate some of the more important outputs and methods applied.

The maximum set of model parameters offered to the stepwise selection procedure was:

$$\text{CPUE} = \beta_0 + \beta_1 \text{Year} + \beta_2 \text{VesselID} + \beta_3 \text{Depth} + \beta_4 \text{Zone} + \beta_5 \text{Semester} + \beta_6 \text{Pots} + \varepsilon$$

A stepwise backward model selection procedure was deployed in selecting the covariates, to the model. The model with lowest Akaike value (AIC - Akaike Information Criterion) was selected as the best model, since it has a better predictive power. The best model (outlined below) was then used for further analysis.

$$\text{CPUE} = \beta_0 + \beta_1 \text{Year} + \beta_3 \text{Depth} + \beta_4 \text{Zone} + \beta_5 \text{Semester} + \beta_6 \text{Pots} + \varepsilon$$

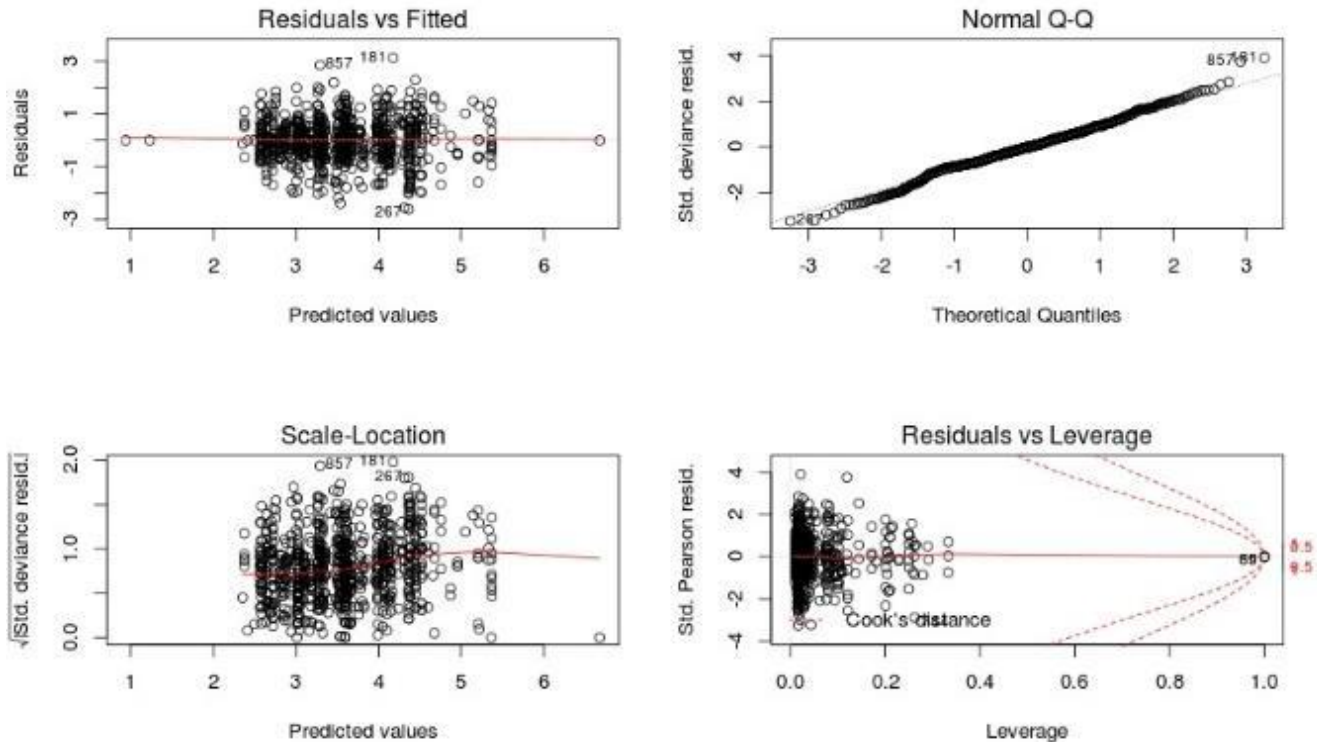
Table 7 presents the estimates of the coefficients, standard error and *t* values for different levels of the factors entered into the selected model. Model covariate year, depth, semester and pots are very significant with p-values of  $2.2 \times 10^{-16}$ ,  $1.546 \times 10^{-9}$ ,  $4.831 \times 10^{-4}$  and  $4.138 \times 10^{-8}$  indicating strong covariance with deep-sea red crab catch rates. Zone, as a covariate, was also significant but to a lesser degree than the aforementioned variables.

**Table 7:** ANOVA results for the CPUE model.

Covariates	Df	Deviance	Residual Df	Residual Deviance	Pr(>Chi)
NULL			859	913.42	
Year	6	277.864	853	635.56	< 2.2e-16 ***

Depth	16	48.552	837	587.01	1.546e-09 ***
Zone	2	3.980	835	587.03	0.0470093 *
as.factor(SEMESTER)	1	7.928	834	575.10	0.0004831 ***
Pots	15	42.000	819	533.10	4.138e-08 ***

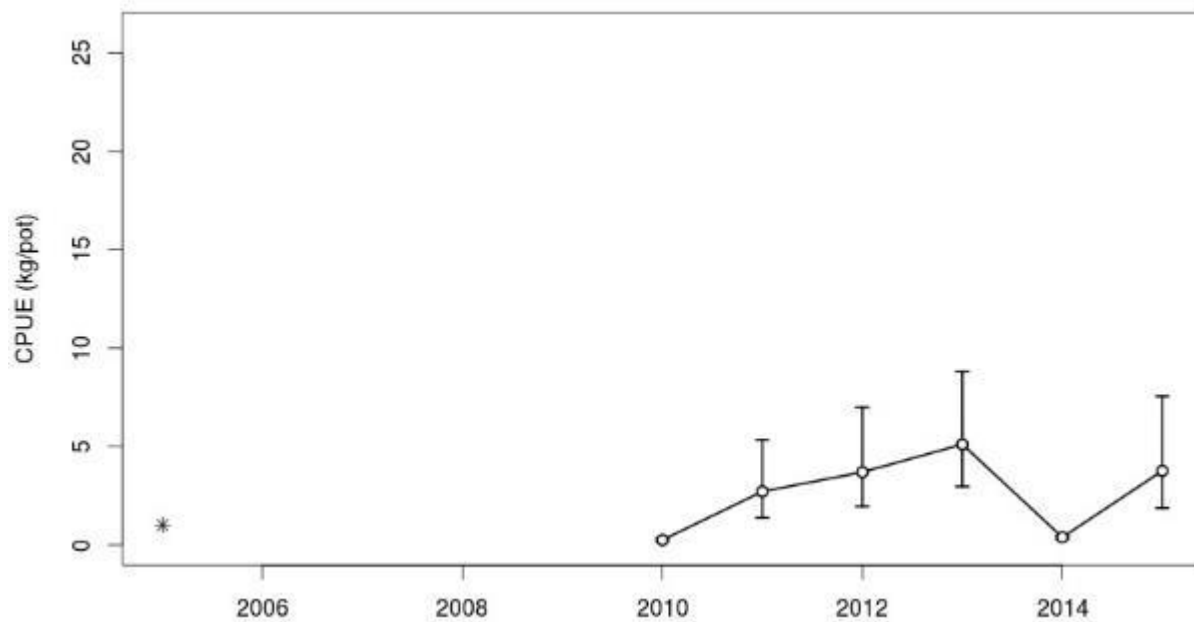
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1



**Figure 13:** QQ and studentized residual plots of the best lognormal fit model for retained catch CPUE (kg/pot).

Model diagnostics of the best model were assessed. This involved checking for normality of the residuals and the spread of the residuals across the fitted values. A total of 23 outliers were removed (out of a total of 883 data points – i.e. outliers removed equates to 2.7% of entire dataset) on the basis of residual skewness and Cook's Distance disparity. After the removal of the outliers diagnostic plots revealed improved distributions thus indicating that model assumptions were not violated. QQplots of the residuals indicated that the model residuals were well within the expected limits for data skewness (Fig. 13). Plots of the residuals versus fitted values indicated evenly distributed data points, no overridingly skewed patterns in the plot (Fig. 13). Therefore there is no evidence of non-constant error variance in the residual plot and independence assumption also appeared reasonable.

Results from the standardized CPUE exercise suggest that CPUE has fluctuated over a moderate range (of 0.248 and 5.108) during the period 2005 to 2015. However, the confidence margins are fairly wide for the main part of the CPUE series – which indicates that the CPUE hasn't change significantly over the period 2011-2015, with the exception of 2010 and 2014 undoubtedly (Fig. 14).



**Figure 14:** Trends in catch CPUE indexes for catches per pot-hour of crabs – with soak time as a categorical variable (factor). Standardized Index: black line with standard deviation (error bars).

#### 4.5 Discussion

In light of new catch and effort data received from the deep-sea red crab fishery in 2015 another run on the standardization of crab CPUE series was conducted in 2015. In contrast to the CPUE standardization of 2014, soak time was not considered as a predictive variable or covariate in the GLM implemented during 2015. The reason for this were twofold:- firstly, the soak times recorded for the 2015 crab fishing operations were far in excess of those calculated for years prior to 2015; and secondly, there doesn't seem to be any correlation between the viability of bait and catch rates in the crab fishery that would necessitate the inclusion of soak time as a predictive variable in the CPUE standardization. For these reasons the CPUE calculated in 2015 for the crab fishery is referenced as “Kg/Pot” and not “Kg/Pot Hour” as was the case in 2014. The CPUE standardization revealed that, although the data series is very short, there was no severe changes in the CPUE trend since 2010 and that it is well within range of the 2005 CPUE.

In 2014 an exploratory Length Cohort Analysis (LCA) was conducted, and was found to be inconclusive but nevertheless indicated that the SEAFO deep-sea red crab resource is not in any risk of over-exploitation. This exploratory exercise was not repeated in 2015.

SC also noted that sampling on deep-sea red crab is quite good, but not all valuable data are available hence it is affecting our choice of an assessment method.

SC discussed in 2014 the possibility of applying the harvest rule and it was decided that the Greenland Halibut harvest control rule used in NAFO may be the most appropriate option for deep-sea red crab. This was adopted by the Commission in 2014.

In 2014 only near 50% of the TAC was caught. The reason for this is unknown to the SC.

#### 4.6 Conclusion

The biological data series obtained from the SEAFO deep-sea red crab fishery, although short, is of relatively good quality. Nevertheless, important data such as growth parameter for the *C. erythraea* stock, which will enhance the cohort analyses of the resource, was not available for the SEAFO CA and emphasis needs to be given in collecting this data for future assessments.

#### 4.7 Biological reference points and harvest control rules

At this point in time it should be noted that no biological reference points exist for this stock in the SEAFO CA.

However, it is worthwhile to note that the *C. erythraea* stock, based on the grounds of it being a long-lived and relatively stable stock, is a good candidate for an empirical Harvest Control Rule (HCR) similar to that applied to the Greenland halibut stock by the North Atlantic Fisheries Organization (NAFO). This is a simple HCR that merely considers that slope of an abundance index such as the CPUE and applies a catch limit to future years based in the current year's TAC. The concept is as follows:

$$TAC_{y+1} = \begin{cases} TAC_y \times (1 + \lambda_u \times slope) & \text{if } slope \geq 0 \quad \dots \text{rule 1} \\ TAC_y \times (1 + \lambda_d \times slope) & \text{if } slope < 0 \quad \dots \text{rule 2} \end{cases}$$

Slope: average slope of the Biomass Indicator (CPUE, Survey) in recent 5 years.

- $\lambda_u$  :TAC control coefficient if slope > 0 (Stock seems to be growing) :  $\lambda_u=1$
- $\lambda_d$  :TAC control coefficient if slope < 0 (Stock seems to be decreasing) :  $\lambda_d=2$
- TAC generated by the HCR is constrained to  $\pm 5\%$  of the TAC in the preceding year.

For the interim this is considered to be a fairly good starting point, given the current status of the *C. erythraea* resource, until such time that additional data are available for more advance stock assessment approaches.

### 5. Incidental mortality and bycatch of fish and invertebrates

#### 5.1 Incidental mortality (seabirds, mammals and turtles)

No incidental catches of seabirds, mammals and turtles have been recorded from the deep-sea red crab fishery to date.

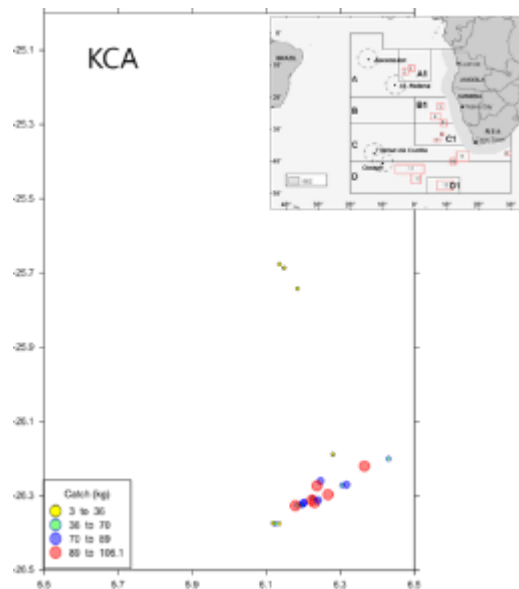
#### 5.2 Fish bycatch

There was a single record of 5.2kg on an unidentified fish specie in B1, 2010

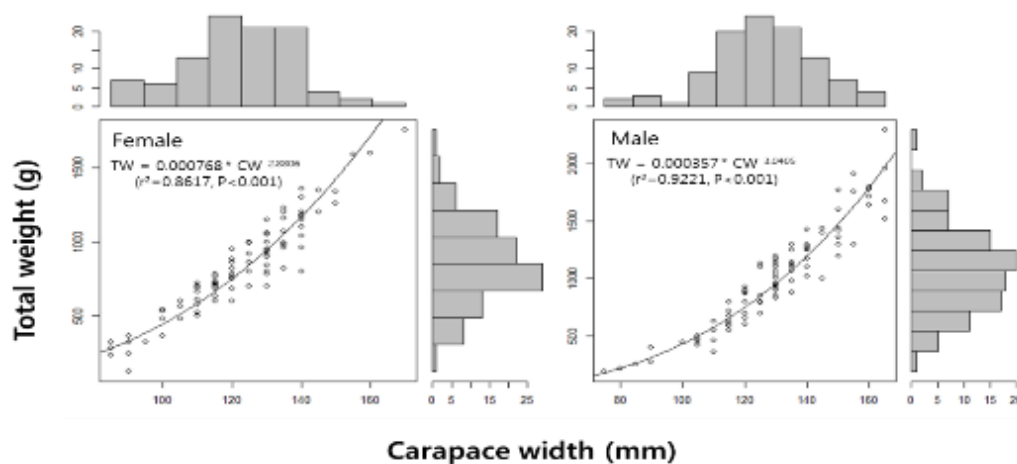
#### 5.3 Invertebrate bycatch including VME taxa

Very limited bycatches of invertebrate and VME taxa have been reported from the SEAFO deep-sea red crab fishery. To date roughly 1343kg of King crab (*Lithodesferox* – KCA) bycatches been recorded from the deep-sea red crab fishery in Division B1 (Fig. 15 & 16). All these bycatches were made during 2015 only.





**Figure 15:** Spatial reference of King crab (*Lithodes ferox*) bycatches recorded from the deep-sea red crab fishery in Division B1 during 2015.



**Figure 16:** Sample statistics of King crab bycatches recorded by the deep-sea red crab fishery in Division B1 during 2015.

Incidental bycatches of VME indicator species have been minimal, and to date no bycatches exceeding the encounter thresholds have been recorded from the SEAFO deep-sea red crab fishery.

#### 5.4 Incidental mortality and bycatch mitigation methods

There are no incidental and bycatch mitigation measures for the deep-sea red crab fishery in the SEAFO CA.

#### 5.5 Lost and abandoned gear

No lost and abandoned gear data have been reported for the deep-sea red crab fishery in the SEAFO CA.

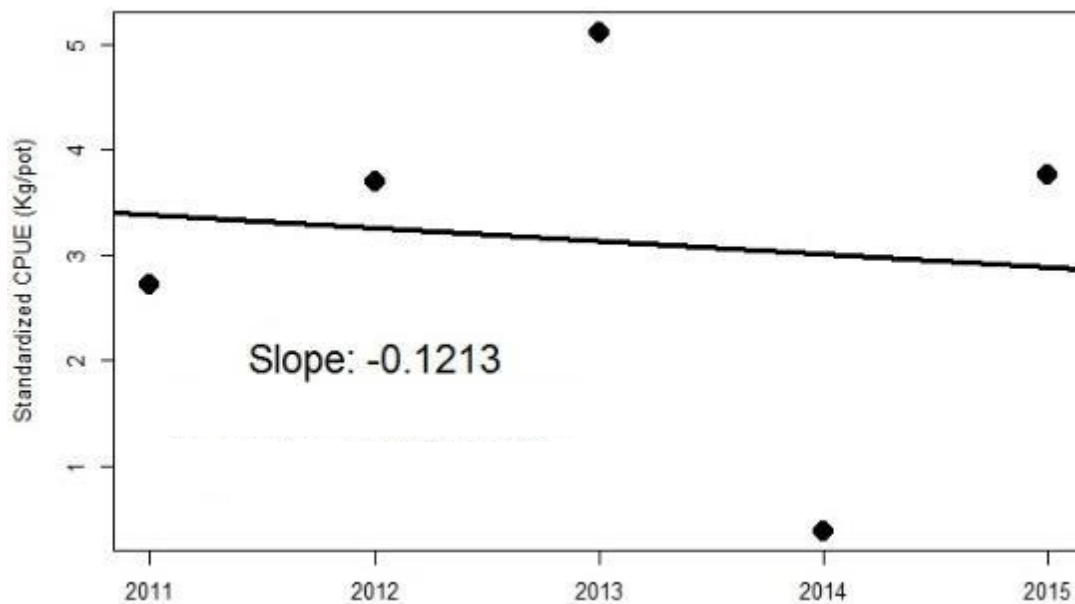
#### 5.6 Ecosystem implications and effects

Negative ecosystem impact of crab fishing are assumed to be limited due to the character of pot fishing. This includes impact on benthic fauna. Depletion of the crab resource would however possibly a significant ecosystem effect constitute.

## 6. Current conservation measures and management advice

There was no fishery in 2016 hence no new catch or effort data which are data required to update the CPUE series forming the basis for the application of the HCR as adopted by the Commission in 2015. The SC resorted to applying the HCR based on pre 2016 CPUE trend (Figure 17).

The SC agreed to adopt the best estimate of the slope which is -0.1213. Under this scenario the HCR stipulates the use of “Rule 2” for setting the TAC.



**Figure 17:** Regression line fitted to average annual CPUEs (2011-2015) for use in Harvest Control Rule.

Considering that no catches were recorded outside Division B1 the 2017 TAC recommendations are only applied to Division B1.

$$TAC_{2017} = TAC_{2016} * (1 + (2 * \text{slope}))$$

$$TAC_{2017} = 190 \text{ tons} * (1 + (2 * -0.1213))$$

$$TAC_{2017} = 144 \text{ tons}$$

However, the difference between the 2016 and proposed 2017 TAC is greater than the 5% limit stipulated by the HCR. **SC therefore recommends a TAC for 2017 and 2018 be set at 180 tons for Division B1, and 200 tons for the remainder of the SEAFO CA.**

The SC emphasize that the application of the HCR despite that there was no fishery in 2016, assumes that the CPUE trends derived in 2015 has been maintained. The validity of that assumption is uncertain. The TAC for 2016 year was not taken but the reasons for the interruption in the fishery are not known.

**Table 8:** Other Conservation Measures that are applicable to this fishery.

Conservation Measure 04/06	On the Conservation of Sharks Caught in Association with Fisheries Managed by SEAFO
Conservation Measure 14/09	To Reduce Sea Turtle Mortality in SEAFO Fishing Operations.
Conservation Measure 25/12	On Reducing Incidental Bycatch of Seabirds in the SEAFO Convention Area
Conservation Measure 30/15	On the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area
Conservation Measure 31/15	On Total Allowable Catches and related conditions for Patagonian Toothfish, orange roughy, Alfonsino and Deep-Sea Red Crab in the SEAFO Convention Area in 2014

## 7. References

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- López-Abellán, L.J., J.A. Holtzhausen, L.M. Agudo, P. Jiménez, J. L. Sanz, M. González-Porto, S. Jiménez, P. Pascual, J. F. González, C. Presas, E. Fraile and M. Ferrer. 2008. Preliminary report of the multidisciplinary research cruise on the Walvis Ridge seamounts (Atlantic Southeast-SEAFO). <http://hdl.handle.net/10508/370>, Part I-II: 191 pp.

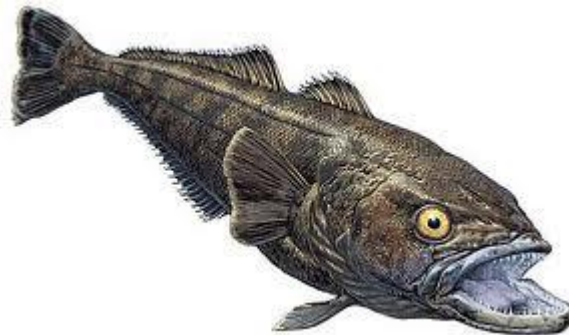
**APPENDIX IX – Stock Status Report – Patagonian toothfish**

**STATUS REPORT**

*Dissostichus eleginoides*

Common Name: Patagonian toothfish

FAO-ASFIS Code: TOP



**2016**  
**Updated 14 October 2016**

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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, the Republic of Korea, Spain and South Africa. Historically a maximum of four vessels per year fished in the SEAFO CA. The Spanish longline system and the Trotline (Fig. 1) are the fishing gears commonly used.

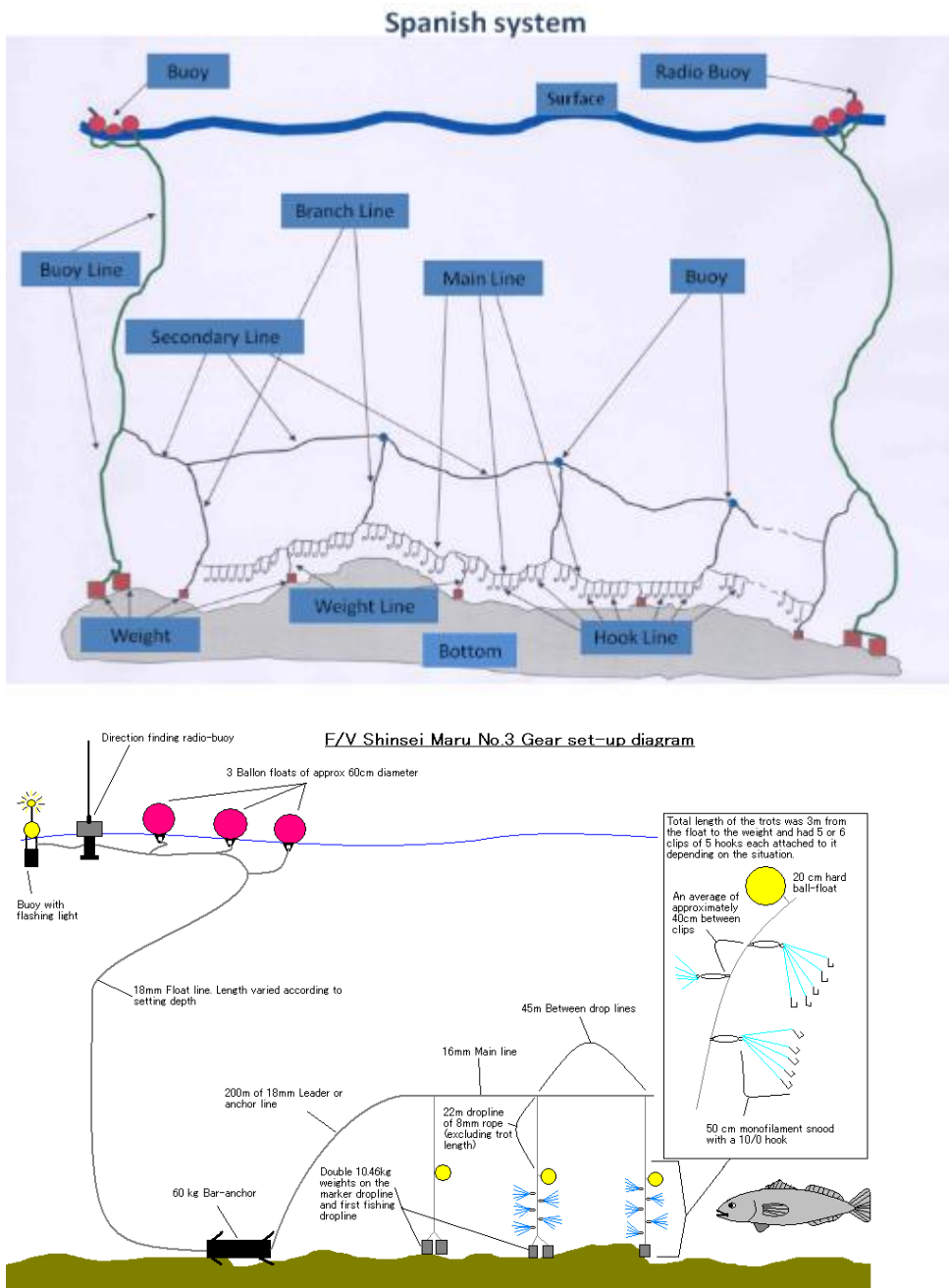
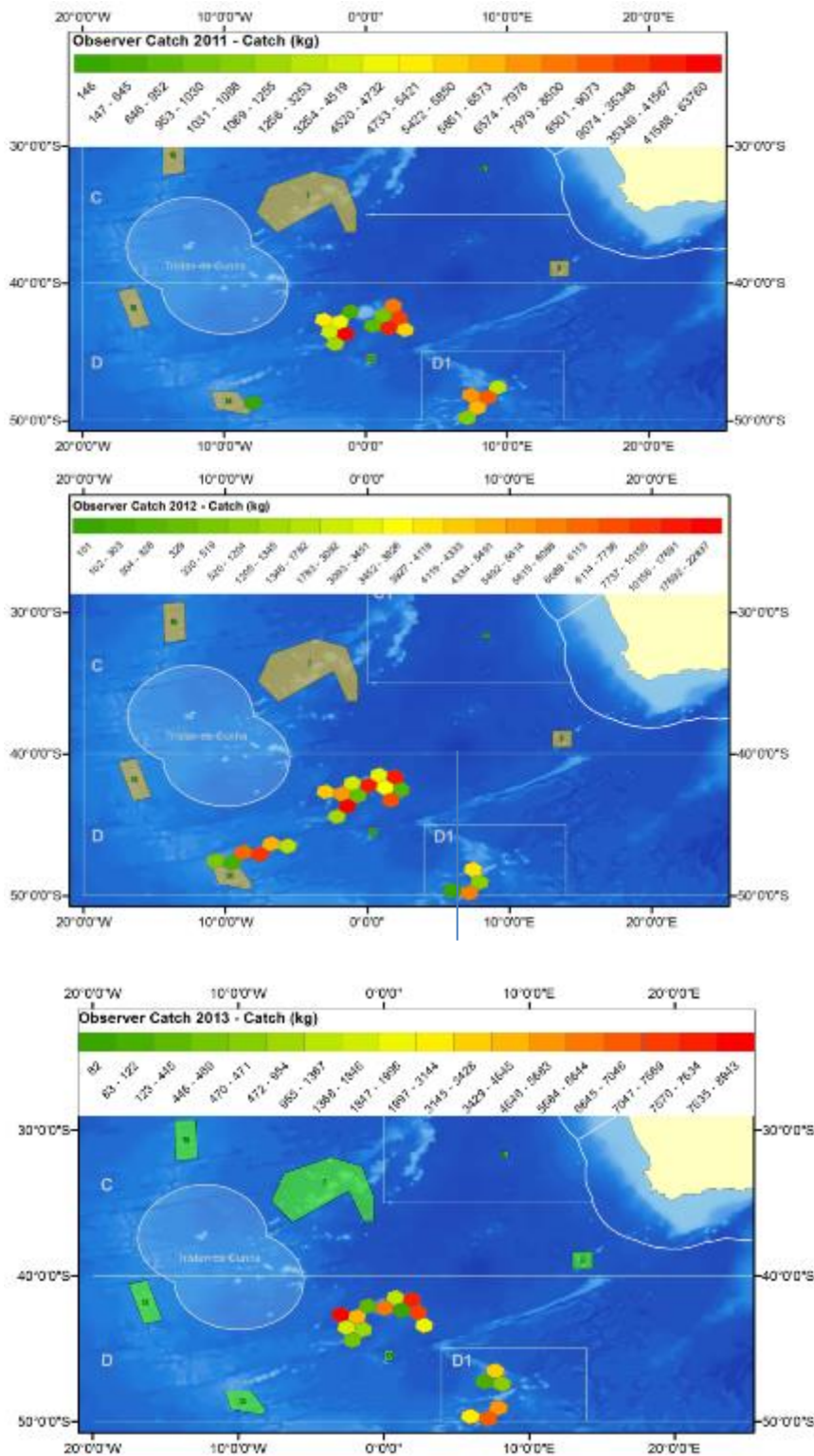
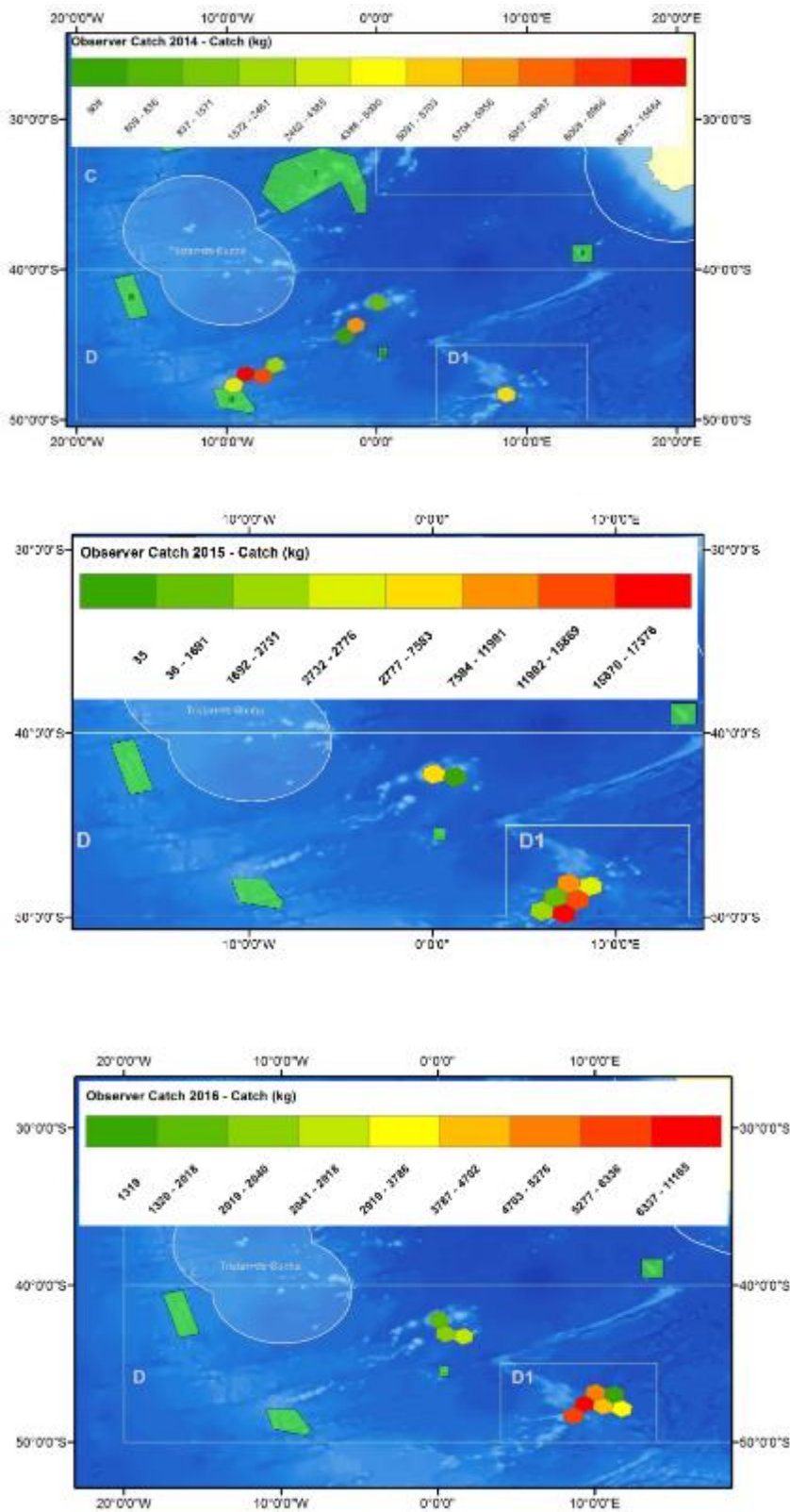


Figure 1: Fishing gears used to fish *D. eginoides*: Spanish longline system (top) and the Trotline (bottom).

1.2 Spatial and temporal distribution of fishing

In SEAFO CA, the fishery from 2011 to 2014 took place in Sub-Area D, being concentrated over seamounts in Division D1, at Discovery seamount and also at seamounts located in the western part of Sub-Area D (Fig. 2).





**Figure 2:** Reported catch of Patagonian toothfish (*Dissostichus eleginoides*) aggregated to 100km diameter hexagonal cells (2011-2016).

Table 1 shows that the main fishing ground is located on Discovery seamount and also in D1 but less hauls were deployed in the western seamounts of Sub-Area D.



**Table 1:** Number of sets by year and location

Year	Western	Discovery	D1- Meteor
2010	27	5	118
2011	1	207	54
2012	68	207	25
2013	0	108	57
2014	100	64*	13
2015	0	24	127
2016	0	22	67

### 1.3 Reported retained catches and discards

Table 2A presents data on Patagonian toothfish catches and discards listed by country, as well as fishing gear used and the management area from which catches were taken. Annual catches varied between 18t (2002) and 413t (2007).

Discards were mainly due to parasite infection of fish. In the last three years with complete data (2013, 2014 and 2015) retained catches were 61, 79 and 59t respectively and the annual weight of discarded specimens was 3, 7 and 2 t in the three year period.

Table 2A: Catches (tons) of Patagonian toothfish (*Dissostichusleginoides*) by South Africa, Spain, Japan and Korea (2002-2016)

Nation <sup>o</sup>	Spain <sup>o</sup>		Japan <sup>o</sup>				Korea <sup>o</sup>				South Africa <sup>o</sup>			
	Longlines <sup>o</sup>		Longlines <sup>o</sup>				Longlines <sup>o</sup>				Longlines <sup>o</sup>			
	D0 <sup>o</sup>		D0 <sup>o</sup>		D1 <sup>o</sup>		D0 <sup>o</sup>		D1 <sup>o</sup>		D0 <sup>o</sup>		D1 <sup>o</sup>	
Catch details (t) <sup>o</sup>	Ret. <sup>o</sup>	Disc. <sup>o</sup>	Ret. <sup>o</sup>	Disc. <sup>o</sup>	Ret. <sup>o</sup>	Disc. <sup>o</sup>	Ret. <sup>o</sup>	Disc. <sup>o</sup>	Ret. <sup>o</sup>	Disc. <sup>o</sup>	Ret. <sup>o</sup>	Disc. <sup>o</sup>	Ret. <sup>o</sup>	Disc. <sup>o</sup>
2002 <sup>o</sup>	18 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>
2003 <sup>o</sup>	101 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	47 <sup>o</sup>	<sup>o</sup>	245 <sup>o</sup>	0 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>
2004 <sup>o</sup>	6 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	124 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>
2005 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	158 <sup>o</sup>	<sup>o</sup>	15 <sup>o</sup>	0 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>
2006 <sup>o</sup>	11 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	152 <sup>o</sup>	<sup>o</sup>	7 <sup>o</sup>	0 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>
2007 <sup>o</sup>	NF <sup>o</sup>	<sup>o</sup>	151 <sup>o</sup>	<sup>o</sup>	15 <sup>o</sup>	<sup>o</sup>	247 <sup>o</sup>	0 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>
2008 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	19 <sup>o</sup>	0 <sup>o</sup>	104 <sup>o</sup>	0 <sup>o</sup>	79 <sup>o</sup>	0 <sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>	<sup>o</sup>
2009 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	82 <sup>o</sup>	0 <sup>o</sup>	4 <sup>o</sup>	0 <sup>o</sup>	16 <sup>o</sup>	0 <sup>o</sup>	46 <sup>o</sup>	0 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>
2010 <sup>o</sup>	26 <sup>o</sup>	0 <sup>o</sup>	41 <sup>o</sup>	0 <sup>o</sup>	12 <sup>o</sup>	2 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>
2011 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	172 <sup>o</sup>	6 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	15 <sup>o</sup>	0 <sup>o</sup>	28 <sup>o</sup>	0 <sup>o</sup>
2012 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	86 <sup>o</sup>	3 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	24 <sup>o</sup>	0 <sup>o</sup>	12 <sup>o</sup>	0 <sup>o</sup>
2013 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	41 <sup>o</sup>	2 <sup>o</sup>	20 <sup>o</sup>	1 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>
2014 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	67 <sup>o</sup>	6 <sup>o</sup>	12 <sup>o</sup>	<1 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>
2015 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	7 <sup>o</sup>	<1 <sup>o</sup>	52 <sup>o</sup>	<1 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>
2016* <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	7 <sup>o</sup>	<1 <sup>o</sup>	53 <sup>o</sup>	<1 <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>	NF <sup>o</sup>

NF = No Fishing. Blank fields = No data available. \*Provisional (September 2016).  
Ret. = Retained Disc. = Discarded

Table 2B: Atlantic toothfish (*Dissostichus mawsoni*). (TOA) catches and discards

Nation	Japan			
Fishing method	Longlines			
Management Area	D0		D1	
Year	Ret..	Disc.	Ret..	Disc.
2014	< 1	0	0	0
2015	0	0	0	0
2016	0	0	0	0

Ret. = Retained Disc. = Discarded

Retained and discarded bycatch from the Patagonian toothfish fishery are presented in Table 3. The two most important species (in terms of weight) are grenadiers (GRV) and Blue antimora (ANT).

#### ***1.4 IUU***

IUU fishing activity in the SEAFO CA has been reported to the Secretariat latest in 2012, but the extent of IUU fishing is at present unknown.



Species	2015			
	Retained		Discarded	
	D0	D1	D0	D1
GRV			1221	1579
ANT			452	598
BYR				
MCC				
BYR				
BEA				
MZZ				
SRX			16	
MRL			2	
COX				
SKH				
LEV				
KCX				
HYD			233	
BUK				
NOX				
MWS				
ETF			1	
SEC				
SSK				
CKH				
KCF				
TOA				
RTX			146	
BSH			89	
ETF				
HIB			18	
LEV			5	

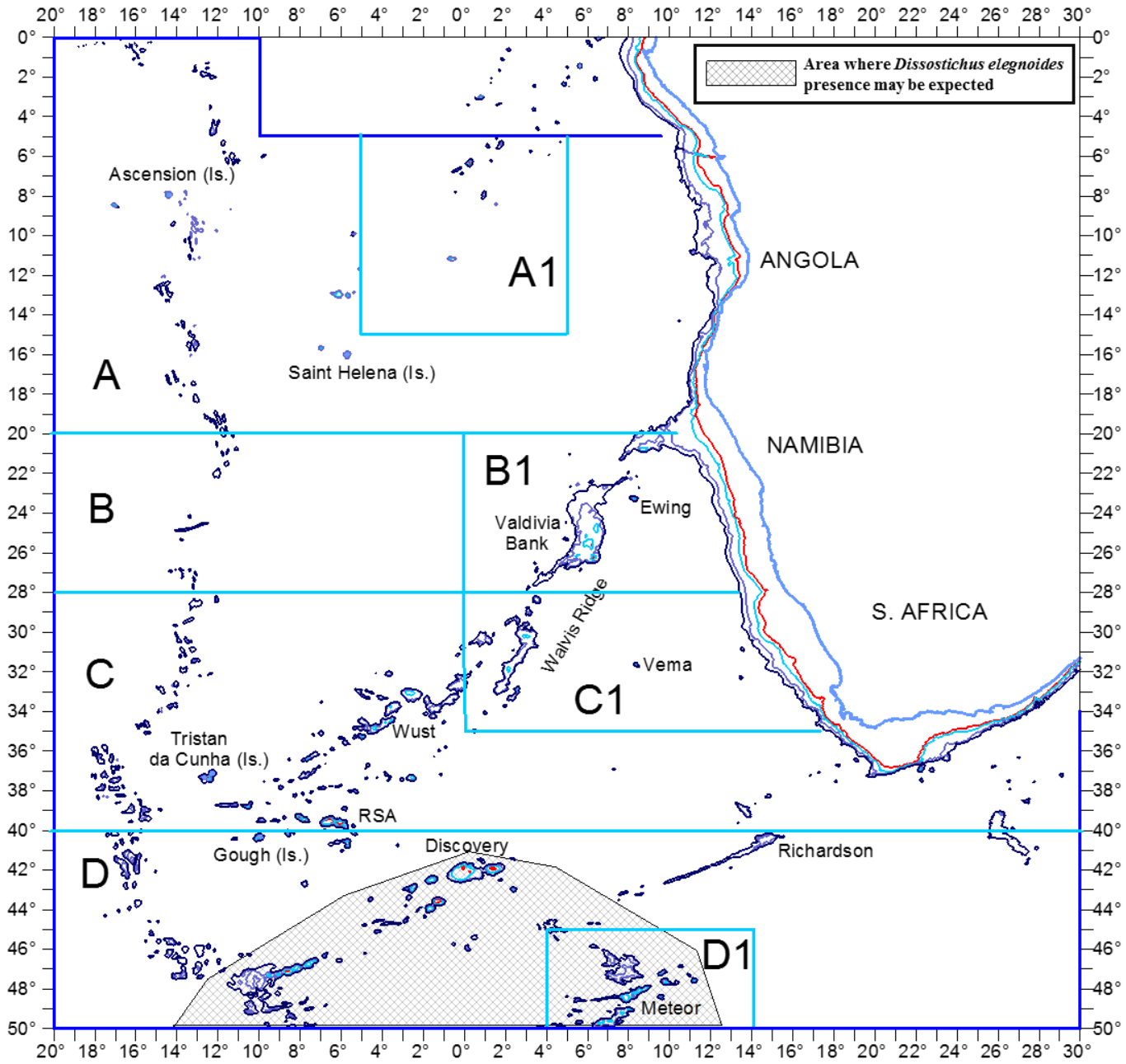
BSH: Blue shark (*Prionace glauca*); ETF: Blackbelly lanternshark (*Etmopterus Lucifer*); HIB: Deep-water arrowtooth eel (*Histiobranchus bathybius*); LEV: Lepidion codlings nei (*Lepidion spp*); ANT: Blue antimora (*Antimora rostrata*); BEA: Eaton's skate (*Bathyraja eatonii*); BYR: Kerguelen sandpaper skate (*Bathyraja irrasa*); COX: Conger eels, etc. nei (*Congridae*); CKH: Abyssal grenadier (*Coryphaenoides armatus*); BUK: Butterfly kingfish (*Gasterochisma melampus*); HYD: Ratfishes nei (*Hydrolagus spp*); LEV: Lepidion codlings nei (*Lepidion spp*); KCX: King crabs, stone crabs nei (*Lithodidae*); MCC: Ridge scaled rattail (*Macrourus carinatus*); GRV: Grenadiers nei (*Macrourus spp*); MWS: Smallhead moray cod (*Muraenolepis microcephalus*); MRL: Moray cods nei (*Muraenolepis spp*); NOX: Antarctic rockcods, noties nei (*Nototheniidae*); MZZ: Marine fishes nei (*Osteichthyes*); KCF: Globose king crab (*Paralomis formosa*); ETF: Blackbelly lantern shark (*Etmopterus lucifer*); SEC: Harbour seal (*Phoca vitulina*); SRX: Rays, stingrays, mantas nei (*Rajiformes*); SKH: Various sharks nei (*Selachimorpha (Pleurotremata)*); (Rajiformes); SSK: Kaup's arrowtooth eel (*Synphobranchus kaupii*).

## 2. Stock distribution and identity

Patagonian toothfish is a southern circumpolar, eurybathic species (70-1600m), associated with shelves of the sub-Antarctic islands usually north of 55°S. Young stages are pelagic (North, 2002). The species occurs 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 3) and El Cano Ridge in the South Indian Ocean (López-Abellán and Gonzalez, 1999, López-Abellán, 2005).

In SEAFO CA 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*. The distribution of the species appears to be driven by the sub-Antarctic front which extends into the SEAFO CA.



**Figure 3:** Species geographical distribution in the SEAFO CA (source: Species profile on the SEAFO website).

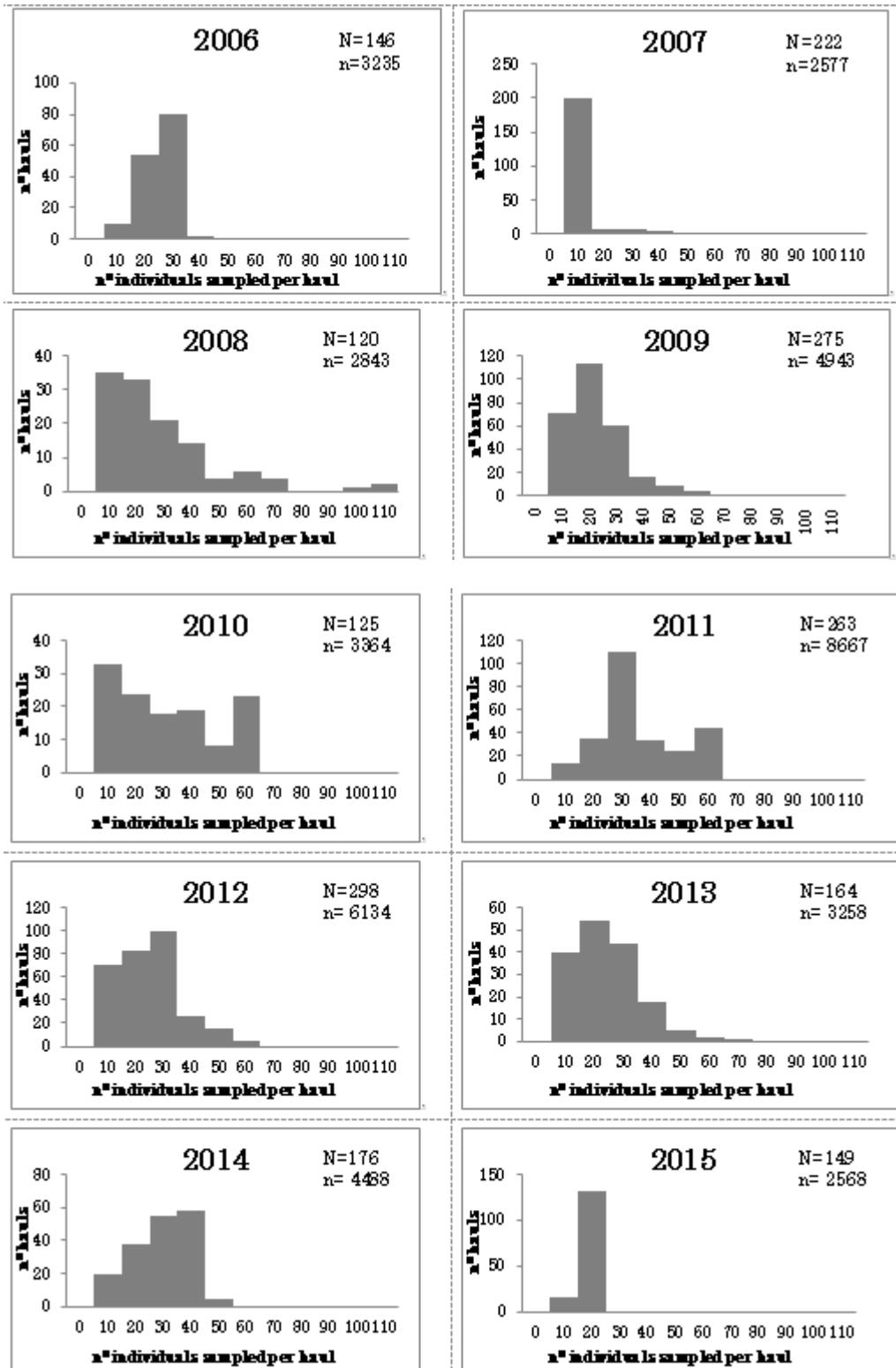
3. Data available for assessments, life history parameters and other population information

**3.1 Fisheries and survey data**

The number of fishing sets sampled from 2006 onwards indicates a good sampling level in line with the SEAFO preliminary guidelines for data collection (Table 4). On average 20 specimens were measured per sampled fishing set, which is considered acceptable given the length range of the exploited population. It will be necessary to apply in future this sampling effort of 20 individuals in all sampled fishing sets (Figure 4).

**Table 4.** Annual analysis of sampling effort conducted on board fishing vessel

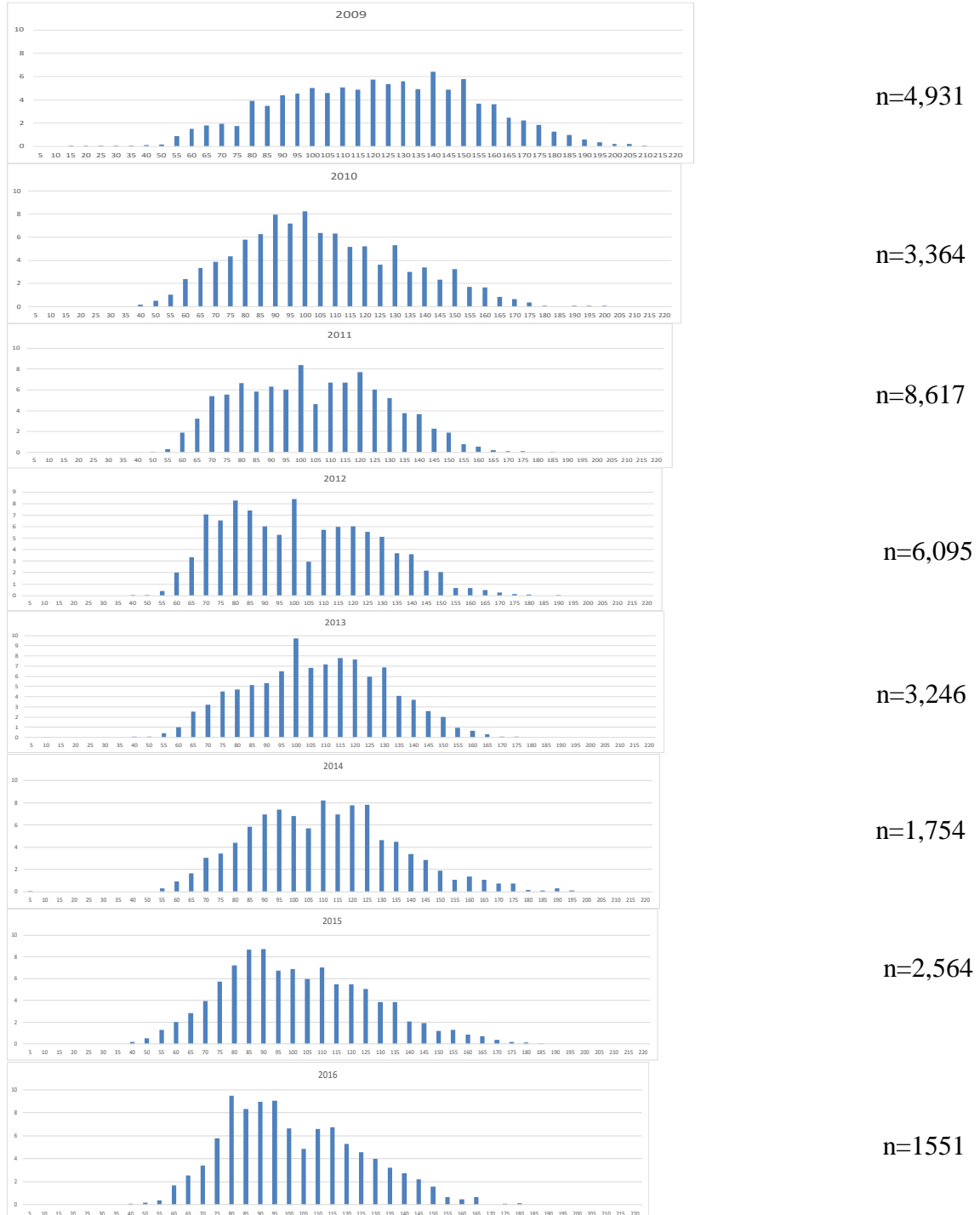
<b>Year</b>	<b>No. of Sets sampled</b>	<b>Mean number of Individuals sampled per set</b>	<b>Min. Individuals sampled per set</b>	<b>Max. Individuals sampled per set</b>	<b>Mean sample size/tonne</b>
2006	146	22.16	1	31	-
2007	222	11.61	1	57	-
2008	120	23.69	2	110	-
2009	275	17.97	1	58	0.13
2010	125	26.91	1	60	0.32
2011	263	32.95	1	60	0.16
2012	298	20.58	1	57	0.17
2013	164	19.87	1	70	0.32
2014	176	25.50	3	50	0.48
2015	149	17.23	1	23	0.29



**Figure 4:** Frequency distribution of sample size per set. Data from Observer Reports submitted to SEAFO. N = number of sets sampled per year; n = total number of individuals sampled.

### 3.2 Length data and frequency distribution

Figure 5 shows the annual total length frequency distributions of Patagonian toothfish catches based on the observer data from all fleets submitted to SEAFO. Length frequency distributions for the period 2006-2013 suggest a shift towards smaller lengths in the catches in more recent years. The proportion of large fish appears to be declining.



**Figure 5:** Annual size % frequency distributions *D. eleginoides* raised in SEAFO CA Sub-Area D. (Y axis :0%-10%)

### 3.3 Length-weight relationships



Table 5 shows the length-weight relationships by sex based on observer data from Japanese fleet in 2013.

**Table 5:** Length-weight relationships by sex (based on 2013 Japanese observer data)

Samples	a	b	r <sup>2</sup>	n
Males	1E-06	3.4484	0.9768	405
Females	2E-06	3.4296	0.9579	860

### 3.4 Age data and growth parameters

There is no available information for this species in SEAFO CA.

### 3.5 Reproductive parameters

There is no available information for this species in SEAFO CA.

### 3.6 Natural mortality

There is no available information for this species in SEAFO CA.

### 3.7 Feeding and trophic relationships (including species interaction)

There is no available information for this species in SEAFO CA.

### 3.8 Tagging and migration

Eleven specimens were tagged in Subarea D in 2006 and fourteen in 2010 (Spanish flagged Viking Bay vessel). However, there is no available information on recoveries of tagged specimens or on tagged specimens tagged at adjacent areas of CCAMLR.

## 4. Stock assessment status

There are no agreed stock assessments.

## 5. Incidental mortality and bycatch of fish and invertebrates

### 5.1 Fish bycatch

Table 6 shows the bycatch species in the Patagonian toothfish (*Dissostichus eleginoides*) Fishery and its weights based on the observer reports. SC noted that the major bycatch is grenadiers (Macrouridae - GRV) and the bycatch is discarded. The impact of this bycatch on grenadiers spp. is unknown.

**Table 6:** VME Bycatch from Patagonia toothfish fishery (kg)

Species	2010		2011	2012	2013	2014		2015	
	D0	D1	D0	D0	D0	D0	D1	D0	D1
Gorgonians (Gorgoniidae)	33.9	13.6	3.8	30.3	2.3	2.6	1.2		0.35
Hard corals, madrepores nei (Scleractinia)	2.1	0.1	15.4	17.6	0.3	2.8			

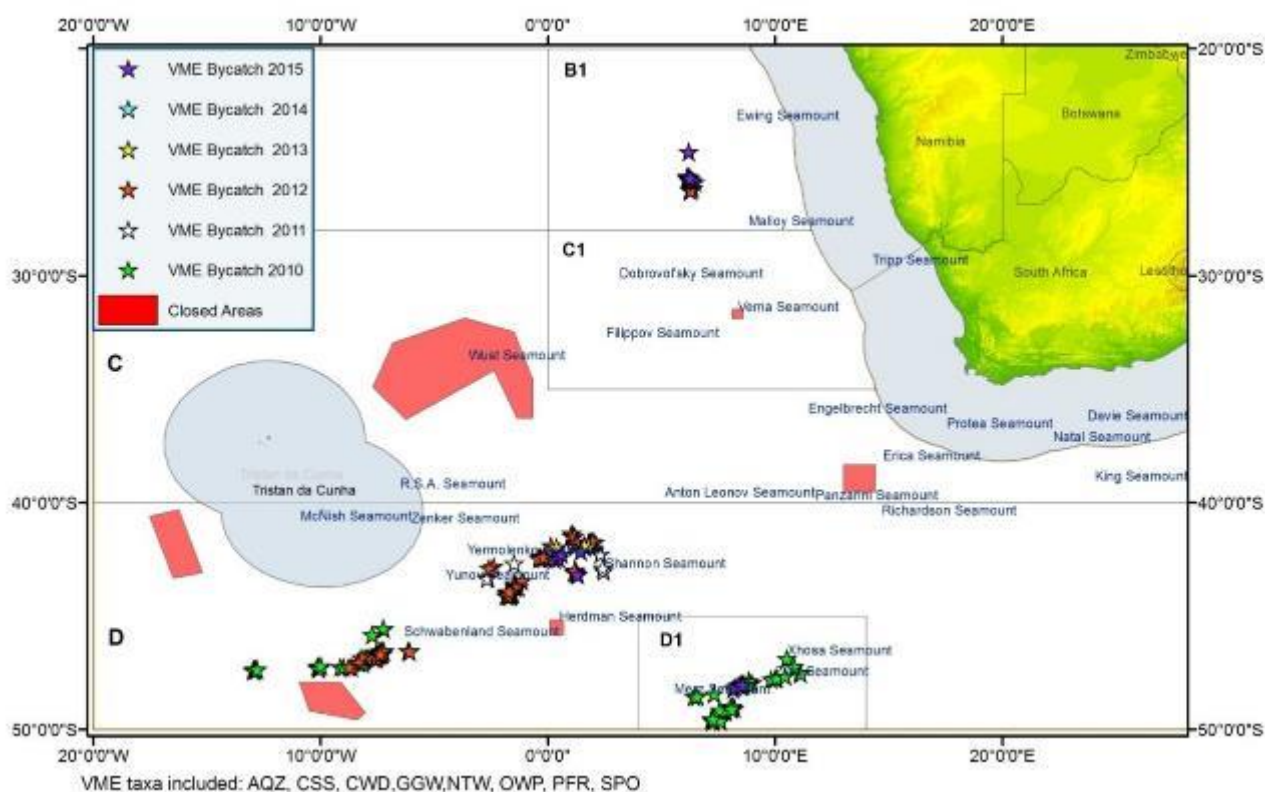
Black corals and thorny corals (Antipatharia)	3.9	0.5		0.2					
Basket and brittle stars (Ophiuroidea)	1.3	2.0							4.9
Sea pens (Pennatulacea)	1.0	0.3		0.0					
Soft corals (Alcyonacea)	0.2	1.0		1.2					
Feather stars and sea lilies (Crinoidea)	0.9	0.1							
Hydrocorals (Stylasteridae)									1
Sponges								0.4	

**5.2 Incidental mortality (seabirds, mammals and turtles)**

In the SEAFO database there are records of three seabirds having been caught during Japanese longline daytime fishing in 2014. The seabirds caught were recorded by the ID codes “PUG” – *Puffinus gravis* (Great shearwater) & “DIM” – *Thalassarche melanophris* (Southern black-browed albatross).

**5.3 Invertebrate bycatch (VME taxa)**

Table 6 shows the bycatch of VME species and its amount based on the observer data for the period 2010-2016. Figure 7 shows their geographic location.



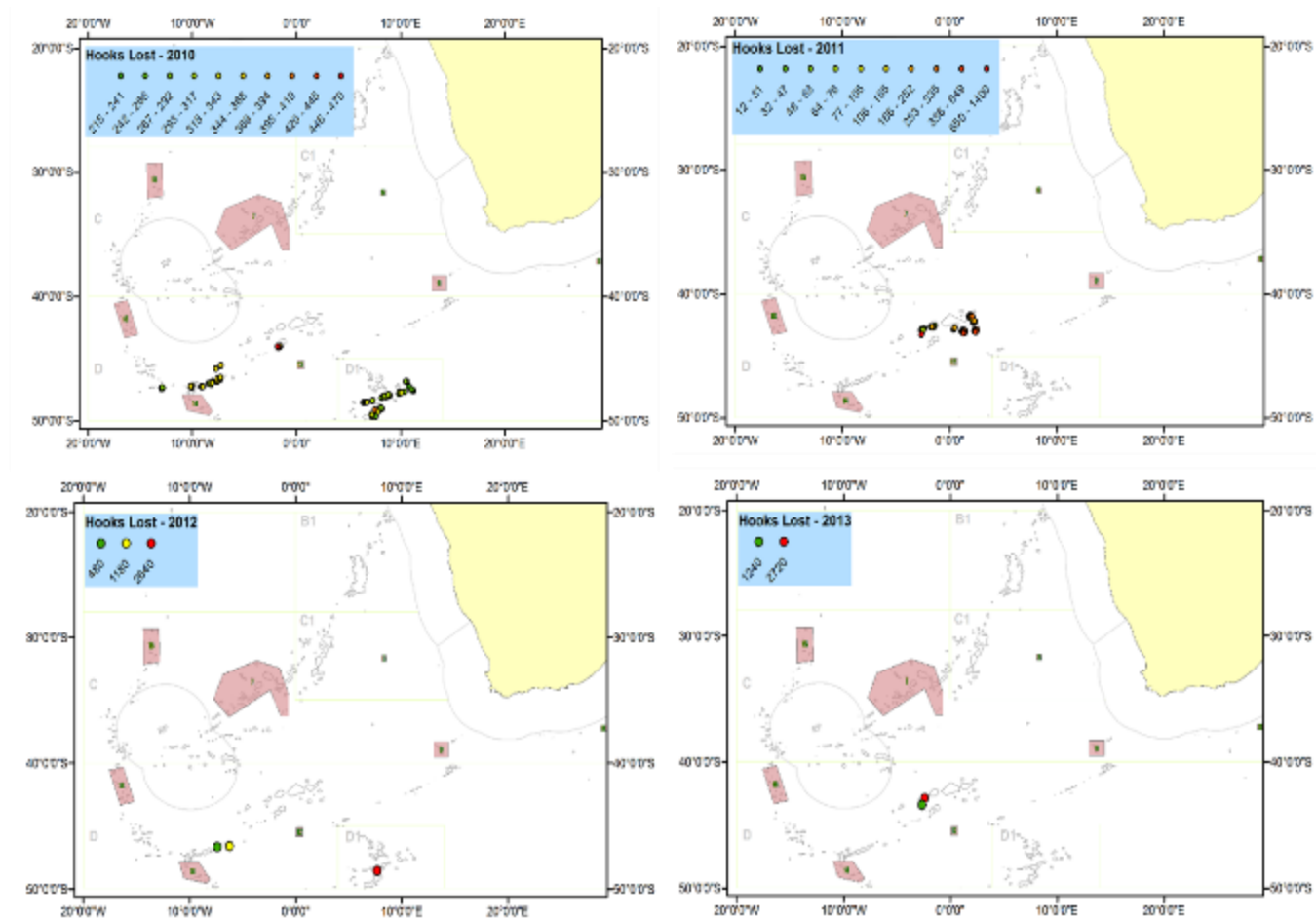
**Figure 7:** Locations for incidental bycatch of VME species from SEAFO Patagonian toothfish fishery.

**5.4 Incidental mortality and bycatch mitigation methods**

Offal dumping during hauling and bird scaring devices (Tori lines) are mandated to mitigate seabird bycatch.

### 5.5 Lost and abandoned gear

Figure 8 shows locations and amount of the lost gears based on the observer data from 2010 to 2013 (no lost gear in 2014-2015).



**Figure 8:** Locations and amount of the lost gears (hooks with attached short line) based on observer data (2010-2013) (no lost gear in 2014-2015).

## 6. Current conservation measures and management advice

In 2015 the Commission adopted a TAC of 264 t in Sub-Area D applying the harvest control rule, and zero tonnes for the remainder of the SEAFO CA for 2016.

The SC notes that in both 2015 and 2016 about 22% of the TAC was taken (incl. the experimental fishery), hence the fishery is not constrained by the TAC.

The application of the HCR requires as input a 5-year time-series of recent CPUE data. The CPUE series applied in 2015 was derived by pooling all available data in the SEAFO CA. No analysis was made to determine if pooling was a valid approach. Also, the series first discussed in 2016 was not standardised as in 2015, and questions were asked about the consistency of the analysis between years.

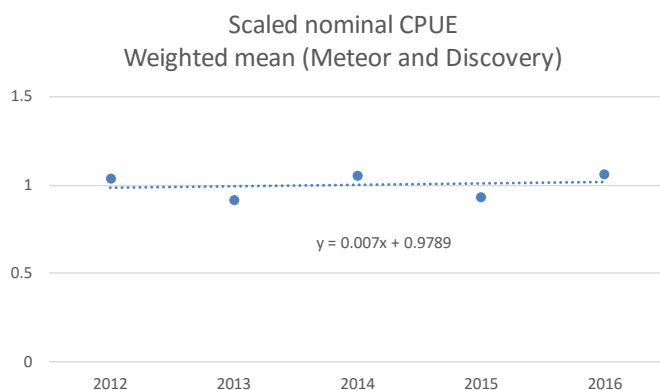
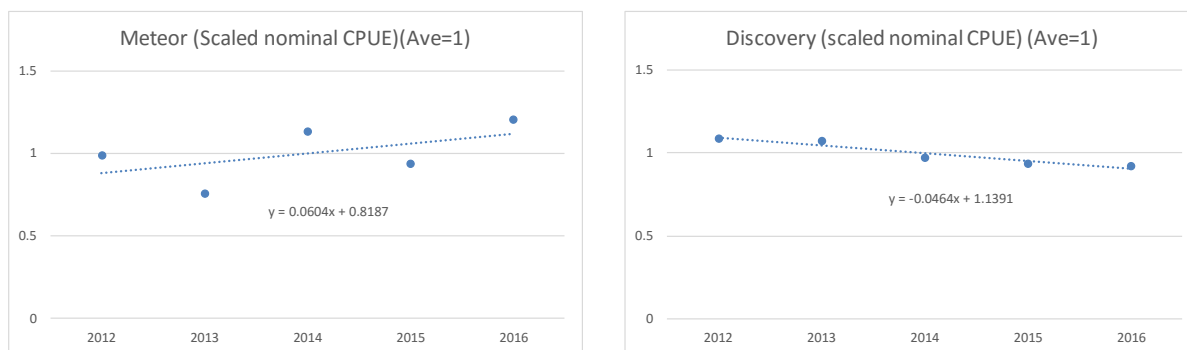
The SC explored standardization using generalised linear models (GLM), but the explorations indicated that the variance explained was too low to extract meaningful results, hence further efforts would be required. There were, however, clear indications of significant area-effects, hence pooling of data from different fishing areas was probably not valid.

The SC then resorted to deriving CPUE series for separate fishing areas for which the more extensive continuous time-series of catch and effort data are available in the SEAFO database, i.e. the Meteor and Discovery seamounts. Data from the Western part were excluded from the assessment as the time series was not complete. Only Japanese data within the 2011 agreed footprint, i.e. from the party taking the bulk of the catch in all years, were used in order to retain consistency through the time series.

It is uncertain whether the two CPUE series shown in Fig. 9 reflects abundance, but in the absence of other alternatives, the series from Meteor and Discovery were considered valid for the derivation of TACs using the recommended and accepted HCR.

The CPUE series as derived both have best estimates of slope close to zero. For Discovery the best estimate is slightly negative, for Meteor the estimated slope was zero (Fig. 9).

Applying the HCR based on a weighted average of the CPUE slopes on Meteor and Discovery a TAC estimate of 266 t was derived. **The SC recommends a TAC for Subarea D of 266 t and a zero TAC for the remainder of the SEAFO CA for the years 2017 and 2018.**



**Figure 9:** Upper: Average slope in Meteor (left) and Discovery(right) for 5 years CPUE (2012-2016)  
Lower: Average slope based on the weighted average of two slopes.

Other Conservation Measures that are applicable to this fishery can be seen in Table 7.

**Table 7:** Other Conservation Measures that are applicable to this fishery.

Conservation Measure 04/06	On the Conservation of Sharks Caught in Association with Fisheries Managed by SEAFO
Conservation Measure 14/09	To Reduce Sea Turtle Mortality in SEAFO Fishing Operations.
Conservation Measure 25/12	On Reducing Incidental Bycatch of Seabirds in the SEAFO Convention Area
Conservation Measure 30/15	On the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area
Conservation Measure 31/15	On Total Allowable Catches and related conditions for Patagonian Toothfish, orange roughy, Alfonsino and Deep-Sea Red Crab in the SEAFO Convention Area in 2014

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**Annex A: Biological data collected**

Sex information collected (2009-2016)

	2009	2010	2011	2012	2013	2014	2015	2016	total
	1	22				399			422
ANT	39	464				607	48	86	1244
BOA								1	1
BSH							1	1	2
BYR	18								18
CGE								11	11
ETF								1	1
GRV		655						197	852
HIB								2	2
KCU								1	1
KCX		29						35	64
MCC	84						165	234	483
MCH							463	641	1104
MRL								1	1
QMC							198		198
RTX						958	60		1018
SRX							2		2
TOA						11			11
TOP	4931	3364	8652	6095	3247	1754	2564	1551	32158
<b>total</b>	<b>5073</b>	<b>4534</b>	<b>8652</b>	<b>6095</b>	<b>3247</b>	<b>3729</b>	<b>3501</b>	<b>2762</b>	<b>37593</b>

Number of otolith collected for TOP:

	TOP
2014	533
2015	732
2016	749

Gonad information collected:

	ANT	MCC	MRL	TOA	TOP	total
2014				9	533	542
2015					732	732
2016	14	40	1		749	804
<b>total</b>	<b>14</b>	<b>40</b>	<b>1</b>	<b>9</b>	<b>2014</b>	<b>2078</b>

**APPENDIX X – Stock Status Report – Alfonsino**

**STATUS REPORT**

*Beryx splendens*  
Alfonsino



**2016**

**Updated 14 October 2016**

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## 1. Description of the fishery

### 9.6

#### 1.1 Description of fishing vessels and fishing gear

In recent years the Korean trawl fishery was the only fishery targeting the alfonsino in the SEAFO CA. This fishery finished its activity in 2014. During the period 2010-2013 two fishing vessels participated in the fishery.

Although primarily considered as a midwater trawl fishery, 94% of the tows recorded by onboard observers were classified as “Demersal”. Whether or not these trawls were bottom trawls remains uncertain, and this is an issue that still requires clarification.

At the SEAFO CA the vessel1 stern trawler operated with the following fishing gears (Table 1 and Figs. 1- 4 provide the specifications of the fishing gears):

**HAMPIDJAN NET** is a bottom otter trawl with two-piece nets of 66 m in length. The head rope is 48 m long; ground rope is 50 m; the height, width and girth of the net are 5.5 m, 30 m and 100 m, respectively. The cod-end mesh size is 120 mm. The ground gear is 50 m in length and 903 kg in weight, and the float is 1,018 kg.

**MANUFACTURED NET** is a four-piece net with an overall length of 66.9 m. The lengths of the head rope and ground rope are 59.0 m and 77.9 m, respectively. The height, width and girth of the net are 5.5 m, 200 m and 83 m, respectively. The cod-end mesh size is 120 mm. The ground is 77.9 m in length and the weight of the ground is 2,068 kg. The float is 913.200 kg with the floating rate of 44%.

**MIDWATER NET** is 210 m long. The lengths of head rope and ground ropes are 93.6 m. The height and width of the net are 70.0 m and 240-260 m, respectively. The girth of the net is 816 m and the cod-end mesh size is 120 mm.

**Table 1:** Fishing gear specifications at vessel 1

Gear Specifications		HAMPIDJAN NET bottom trawl	MANUFACTURED NET bottom trawl	MIDWATER NET
Otter board	type	VRS-TYPE	VRS-TYPE	VRS-TYPE
	material	Steel	Steel	Steel
	size (mm)	2,300 x 4,030	2,750 x 4,900	1,854 x 3,818
	weight (kg)	3,930	4,320	2,000
	under water weight (kg)	2,619	2,473	1,145
Trawl Net	purpose	bottom fishing (figure1)	bottom fishing (figure2)	mid-water fishing (figure3)
	net length overall(m)	66	66.9	210.0
	head rope (m)	48	59.0	93.6
	ground rope (m)	50	77.9	93.6
	net height (m)	5.5	5.5	70
	net width (m)	30	200	240~260
	net girth (m)	100	83	816
	mesh size (mm)	120	120	120

The vessel2 was a stern trawler which operated with two types of fishing gears: a mid-water trawl net; and the bottom trawl net. The gear used for the operation in the SEAFO Convention Area was the mid-water KITE gear (Figure 4).

The height of the net’s gate is approximately 50 m, and the total length is around 280 m.

When net is settled, it sinks underwater and the sinking depth of the net is controlled by the

wire ropes. The upper and lower parts of the bottom trawl net PE Net have attached plastic buoys and rubber balls respectively. As in the case of KITE gear the wire ropes control the sinking depth of the settled gear.

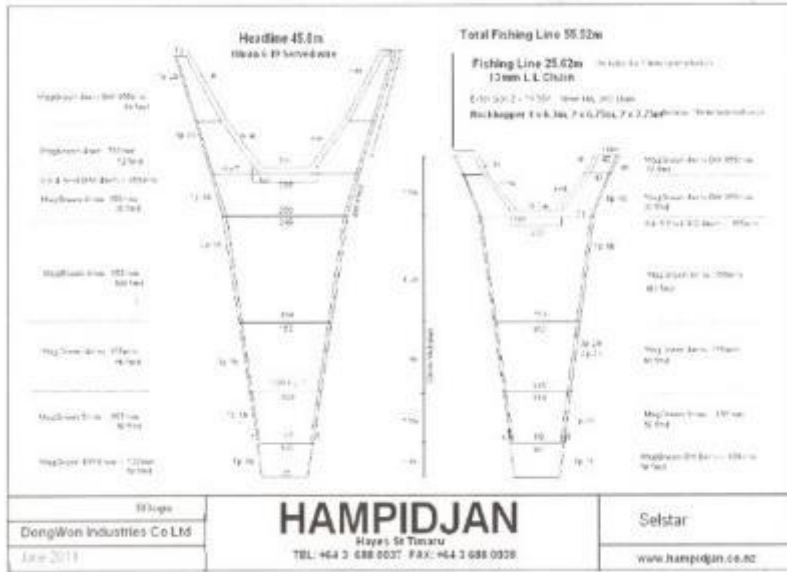


Figure 1: Diagram of HAMPIDJAN NET of the vessel1.

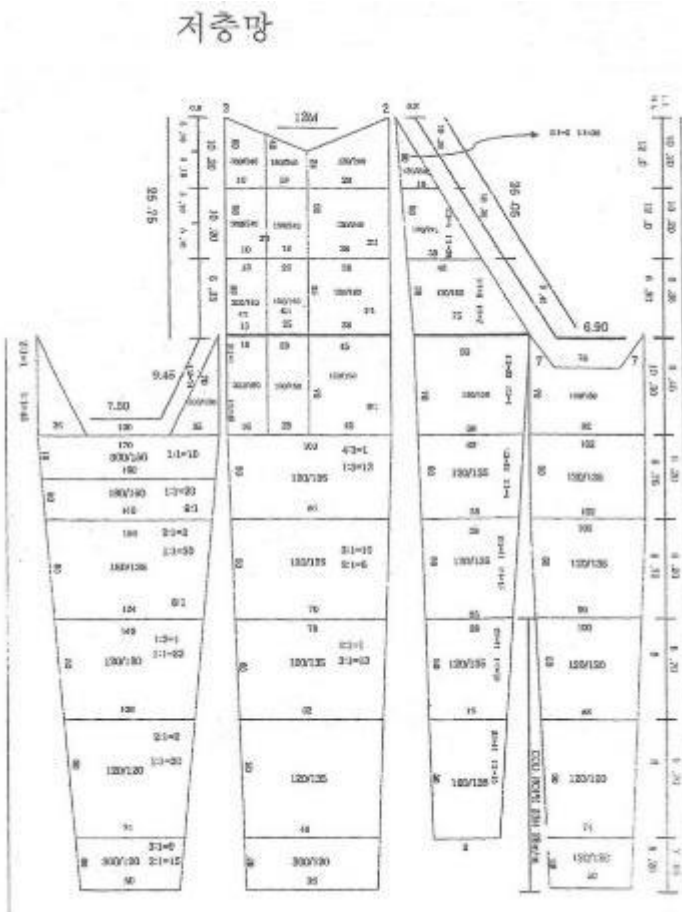


Figure 2: Drawing of the Custom Manufactured Bottom Trawl Net of the vessel1.

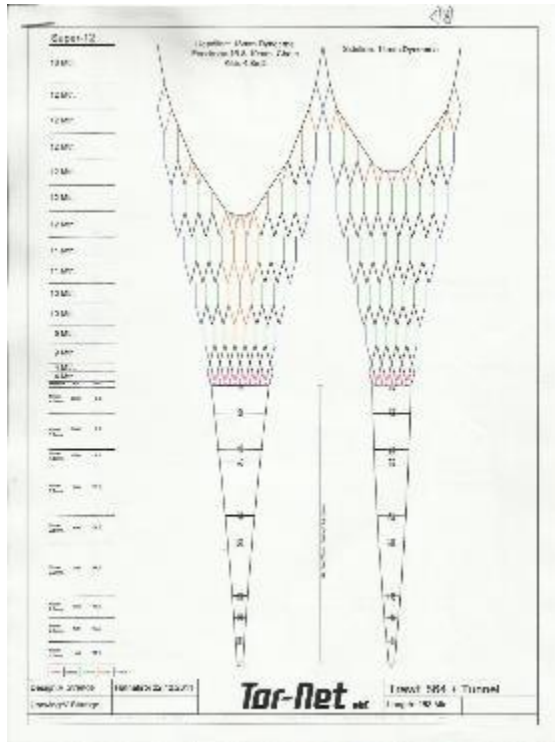


Figure 3: Drawing of mid-water trawl net of the vessel 1.

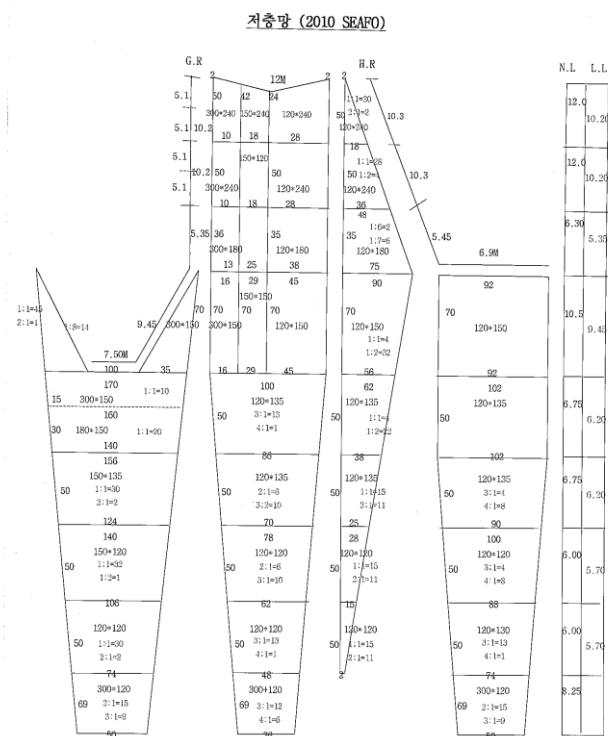
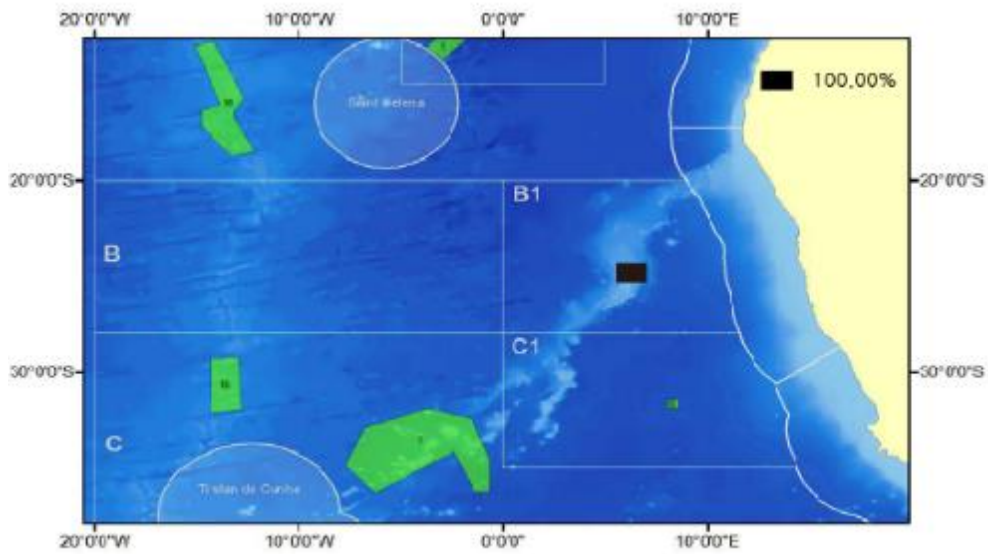


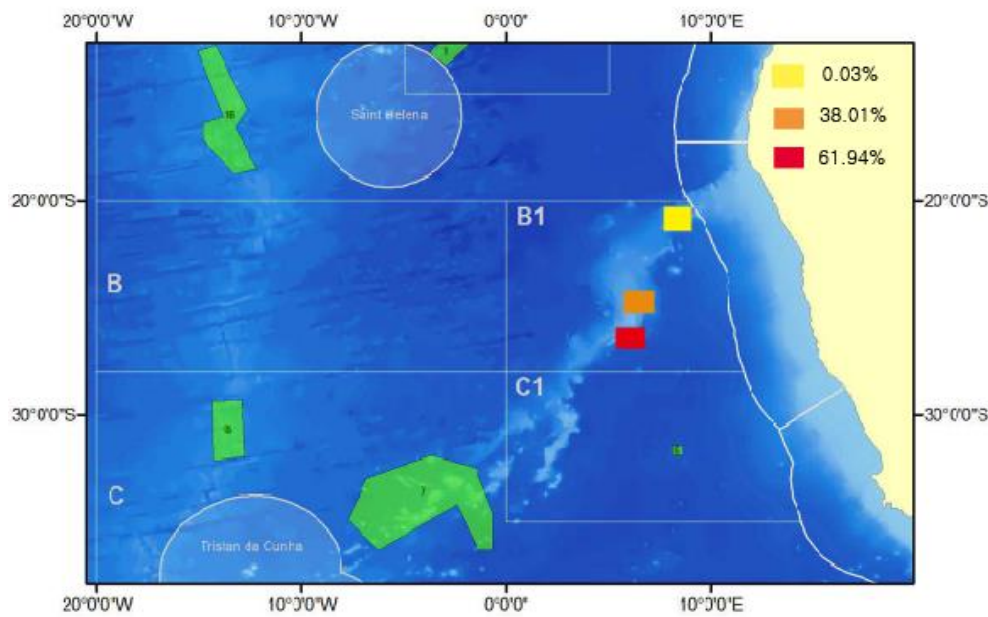
Figure 4: Drawing of mid-water trawl net of the vessel 2.

1.2 Spatial and temporal distribution of fishing

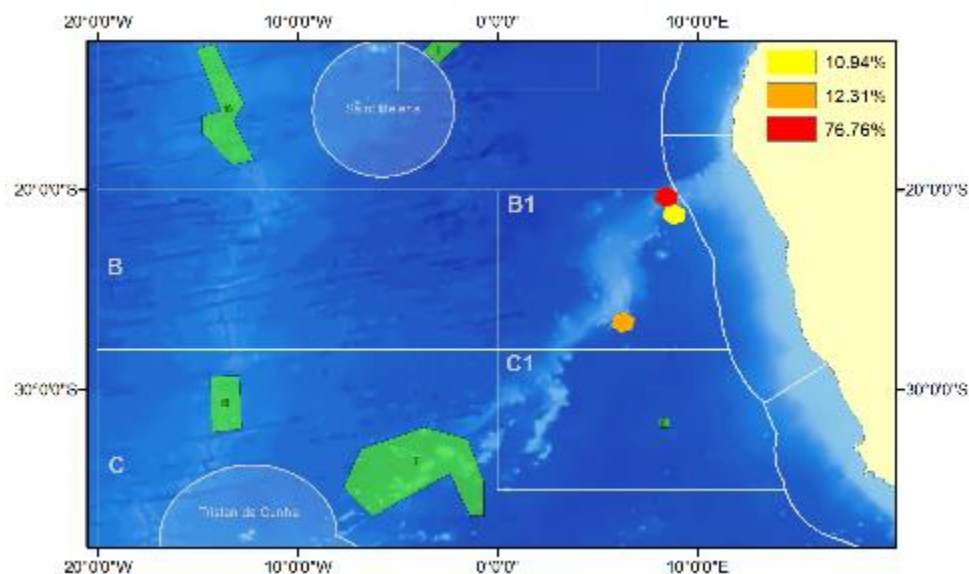
During the period from 2010 to 2011 the Korean trawl vessels caught *Alfonsino* mainly in the northern part of Division B1 and in the southern part in 2012 and 2013 (Fig. 5-8).). The three main fishing grounds in Division B1 are shown in these figures.



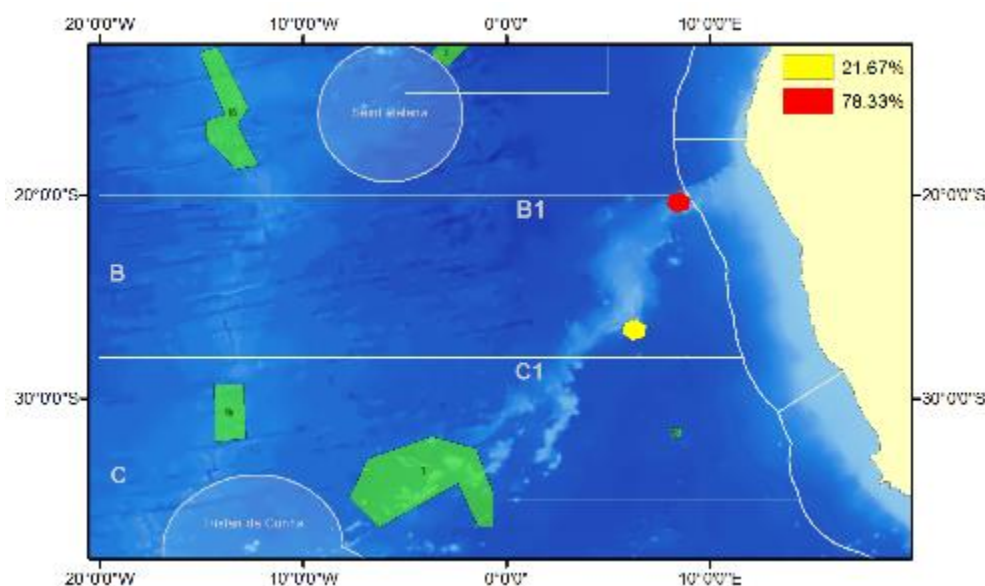
**Figure 5:** Proportion of catch of *Alfonsino* (*B. splendens*) by zone (2013).



**Figure 6:** Proportion of catch of *Alfonsino* (*B. splendens*) by zone c (Jan-Nov 2012).



**Figure 7:** Proportion of catch of Alfonsino (*B. splendens*) aggregated to 100km diameter hexagonal cells (2011).



**Figure 8:** Proportion of catch of Alfonsino (*B. splendens*) aggregated to 100km diameter hexagonal cells (2010).

### 1.3 Reported retained catches and discards

Table 2 presents Alfonsino catches by country, as well as fishing gear and the sub-divisions in which the catch was taken. The main fishing countries worked in the area included Russia (bottom trawl) in the late 1970s, Ukraine in the mid-1990s, Russia (bottom trawl), Norway (bottom trawl), Spain (MWT /BLL), Poland and Namibia (bottom trawl) in the late 1990s, and South Korea (mid-water trawl) for 4 years from 2010 to 2013, respectively, 198 tonnes, 196 tonnes, 172 tonnes and 1.6tonnes. Historically the highest catches of the fish were recorded by Russia with 2,972 and 2,800 tons in 1977 and 1997 respectively, Poland 1,964 tonnes in 1995, and Norway 1,066 tons in 1998 in the SEAFO CA.

**Table 2:** Catches (tonnes) of Alfonsino (*B. splendens*) made by various countries. Values in *italics* are taken from Japp (1999). Values in **bold** are from the FAO.

Management Area	B1	A1	Unknown	Unknown	Unknown	A, B & C
Nations	Namibia	Norway	Russia	Portugal	Ukraine	South Korea
Fishing method	Bottom trawl	Bottom trawl	Bottom trawl			Mid-water trawl
1976			252			
1977			2,972			
1978			125			
1993					<b>172</b>	
1994						
1995	<i>1</i>	N/F				
1996	368	N/F			<b>747</b>	
1997	208	836	2,800		<b>392</b>	
1998	N/F	1,066	<b>69</b>			
1999	1	N/F		<b>3</b>		
2000	<1	242		<b>1</b>		
2001	1	N/F		<b>7</b>		
2002	0	N/F		<b>1</b>		
2003	0	N/F		<b>5</b>		
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	198
2011	N/F	N/F	N/F	N/F	N/F	196
2012	N/F	N/F	N/F	N/F	N/F	172
2013	N/F	N/F	N/F	N/F	N/F	1.6
2014	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F

\* Provisional (September 2016)

N/F means no fishing. Blank fields mean no data available.

Main species	Alfonsino (continued)					
Management Area	Spain	Poland	Unknown Cook Island	Unknown Mauritius	Unknown Cyprus	B1? RSA
Nations			Bottom trawl	Bottom trawl	Bottom trawl	Bottom trawl
Fishing method	MWT /BLL					
Catches						
1976						
1977						
1978						
1993						
1994						
1995		<b>1,964</b>				60
1996						109
1997	<b>186</b>					124
1998	<b>402</b>					
1999						
2000						

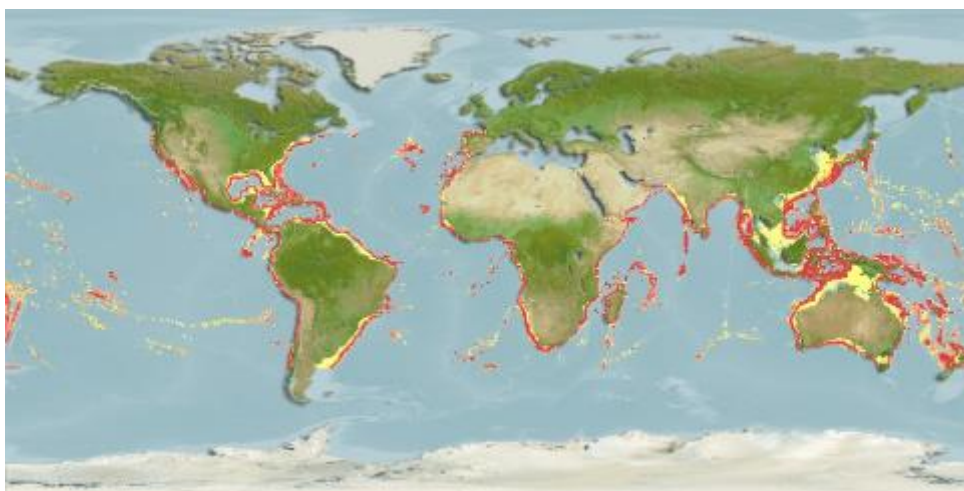
2001	2					
2002						
2003	2					
2004	4		142	115	437	
2005	72					
2006	N/F	N/F	N/F	N/F	N/F	N/F
2007	N/F	N/F	N/F	N/F	N/F	N/F
2008	N/F	N/F	N/F	N/F	N/F	N/F
2009	N/F	N/F	N/F	N/F	N/F	N/F
2010	N/F	N/F	N/F	N/F	N/F	N/F
2011	N/F	N/F	N/F	N/F	N/F	N/F
2012	N/F	N/F	N/F	N/F	N/F	N/F
2013	N/F	N/F	N/F	N/F	N/F	N/F
2014	N/F	N/F	N/F	N/F	N/F	N/F
2015	N/F	N/F	N/F	N/F	N/F	N/F
2016*	N/F	N/F	N/F	N/F	N/F	N/F

#### 1.4 IUU catch

Some IUU fishing activity in the SEAFO CA has been reported for a vessel to the Secretariat, but the extent of this is at present unknown.

## 2 Stock distribution and identity

*Alfonsino* has a global distribution and has been reported from all tropical and temperate oceans (excluding from the northeast Pacific and Mediterranean Sea ) between latitudes of about 65° N and 43° S. It occurs from depths of about 25 m to at least 1300 m (Busakhin 1982). In the Atlantic Ocean the species occurs at both at western (Gulf of Maine to the Gulf of Mexico) and eastern Atlantic (off south western Europe and the Canary Islands to South Africa) (Fig. 9). This species is benthopelagic: adults inhabit the outer shelf (180 m) and slope to at least 1,300 m depth, probably moving further from the bottom at night but ascending to feed in midwater during the night; often found over seamounts and underwater ridges. There are no estimates of migration behaviour. The species is oviparous; spawning in batches. Eggs, larvae and juveniles are pelagic.



**Figure 9:** The distribution of Alfonsino (*B. splendens*) (source: FishBase).

Data available for assessments, life history parameters and other population information

### 3.1 Fisheries and surveys data

Non-availability of the historical data and fishing trends for fishing activities in the SEAFO CA prevent application of standard assessment methods. However, only catch and effort (per haul) data for a period of three years (2010-2012) are available for quantitative stock assessment.

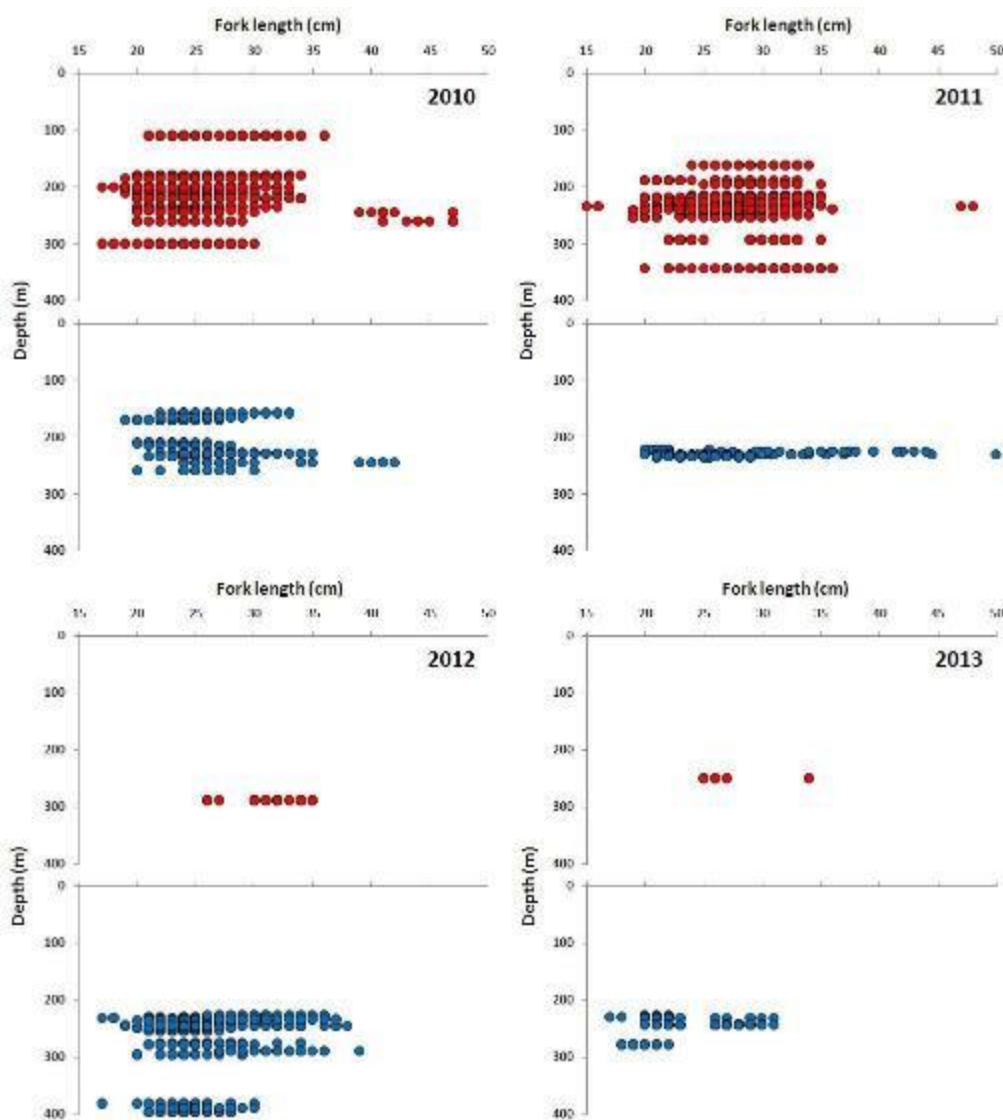
### 3.2 Length data and frequency distribution

Using the data collected by Korean trawl fisheries between 2010 and 2013, the length frequency distributions were analysed (Table 3 and Fig. 10). The catch landing data in 2013 were not enough to represent the situation of the southern area of Division B1. The length of Alfonsino in the southern area of Division B1 was the largest with average 26.5 cm and 28.0 cm at the 3<sup>rd</sup> quartile, with two modes at 22 cm and 27 cm in 2011. In the southern area of Division B1 the length of the fish was also the largest in 2011 and reached about 50 cm fork length. No trend appeared in 2012 (May-June) due to paucity of samples (23 samples). Overall length trends between the areas during 2012-2013 were asymmetric. The length of the species in the northern part was larger than that of southern part in 2012 and 2013.

**Table 3:** Results of length composition of Alfonsino collected by Korean vessels in the SEAFO CA (B1) (2010-2013)

	2010		2011		2012 (5~6)		2012(11)		2013	
	South	North	South	North	South	North	South	North	South	North
No. of samples	200	841	174	593	514	23	77	-	97	5
Minimum length	19.0	17.0	20.0	15.0	17.0	26.0	24.0	-	17.0	25.0
Maximum length	42.0	47.0	50.0	48.0	34.0	35.0	39.0	-	31.0	34.0
Average length	25.8	24.8	26.5	27.8	24.8	31.0	31.5	-	23.7	27.4
Median length	25.0	24.0	25.0	28.0	25.0	32.0	32.0	-	22.0	26.0
1 <sup>st</sup> quartile length	23.0	22.0	23.0	25.0	23.0	30.0	29.0	-	21.0	25.0
3 <sup>rd</sup> quartile length	27.0	26.0	28.0	31.0	26.0	32.5	34.0	-	27.0	27.0

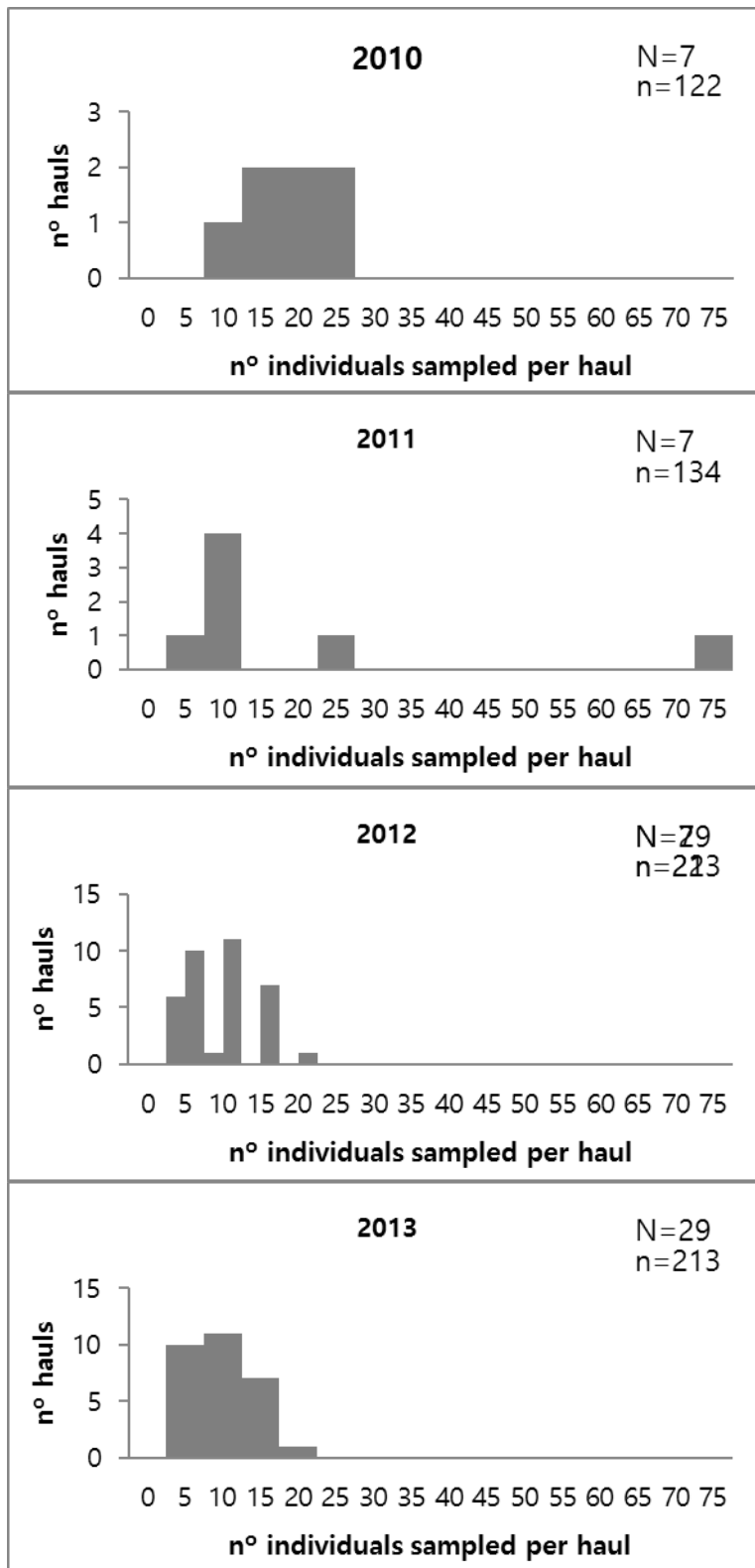




**Figure 11:** Fork length distribution of Alfonsino (*Beryx splendens*) by depth for 2010-2013.

**Table 4:** Summary of fork length distribution of Alfonsino (*Beryx splendens*) by depth for 2010-2013.

	2010		2011		2012(5-6)		2012(11)		2013	
	South	North	South	North	South	North	South	North	South	North
No. of Samples	841	200	174	593	514	23	77	-	5	97
Average Depth (m)	210.9	211.1	229.6	238.4	323.8	288.5	248.2	-	250.0	265.1
Average FL (cm)	25.8	24.8	26.5	27.8	24.8	31.0	31.5	-	27.4	23.7



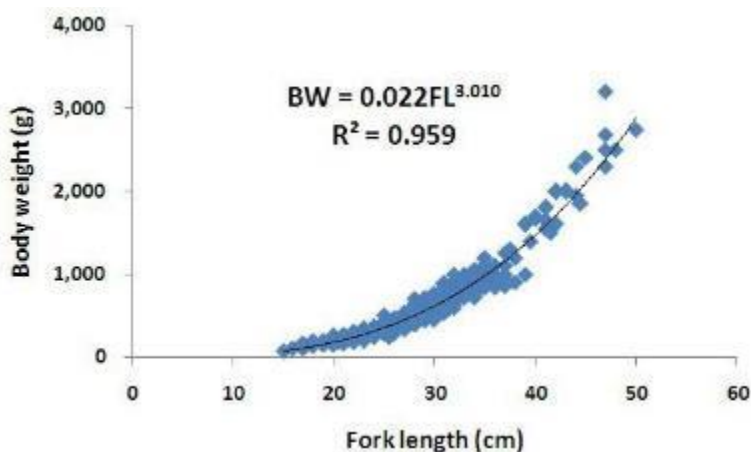
**Figure 12:** The number of individuals of Alfonsino per haul over a period of four year from 2010 to 2013 in the SEAFO CA.

**Table 5:** Number of sets by year, minimum and maximum number of individuals per set and the number of individuals sampled between 2010 to 2013 in the SEAFO CA.

Year	No. of Sets Observed	Mean Individuals	Min. Individuals	Max. Individuals	Mean sample size/tonnes
2010	7	17.429	10	25	0.92
2011	7	19.143	5	75	1.36
2012	29	7.345	1	16	0.06
2013	7	3.143	1	7	1.94

### 3.3 Length-weight relationships

Figure 13 shows the length and weight relationship of Alfonsino for 2010-2013. Two parameters of the length-weight relationship were 0.022 for  $\alpha$  and 3.010 for  $\beta$  of combined sex of Alfonsino.



**Figure 13:** Relationship between length and weight of Alfonsino (*B. splendens*) in the SEAFO CA for 2010 - 2013.

### 3.4 Age data and growth parameters

The maximum observed age of Alfonsino in the Guinean Gulf was 20 years. The growth parameters of Alfonsino were estimated as  $K=0.097 \text{ year}^{-1}$ ,  $L_{\text{inf}}=48 \text{ cm}$ , and  $t_0=-3.08 \text{ year}^{-1}$  using the specimens from Guinean Gulf (López-Abellán *et al.* 2008).

### 3.5 Reproductive parameter

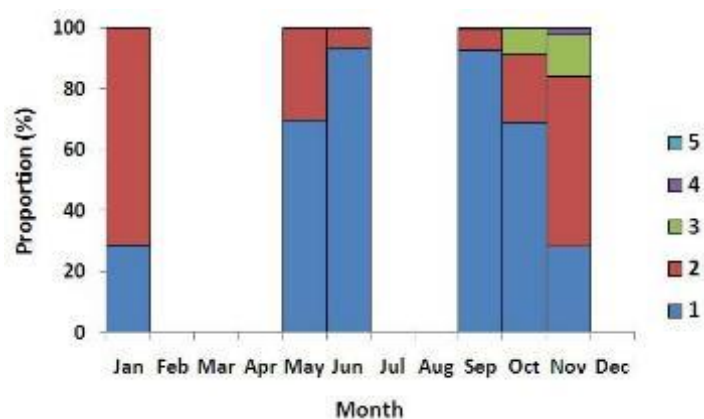
The reproductive parameters of Alfonsino were analysed as follows. Spawning season was evaluated as the period from November to February (Nova Caledonia). Length at 1<sup>st</sup> maturity was estimated as fork length 39.67 cm for females (95% c.i.=39.34, 40.02 cm) and 36.88 cm for males (95% c.i.=36.45, 37.36 cm) (Flores *et al.* 2012). Fecundity was calculated as 270,000 – 650,000 eggs (source: FishBase).

The biological productivity of *B. splendens* is likely to be moderate to low in general (Anonymous, 2007). Alfonsinos are serial spawners and reproduce in the areas that they normally inhabit. Average size at sexual maturity appears to be about 30–34cm (4–6 years

old), and can vary between localities (González et al. 2003). The annual numbers and proportion of the fish by gonad maturity stage by Korean trawl fisheries during the period of 2010 - 2013 are presented in Table 6 and Figure 14. Time of spawning also varies markedly between seasons. The proportion of immature fishes was 99.4%, 91.4%, 98.6% and 97.1% in 2010, 2011, 2012 and 2013, respectively. The fish, which is in pre-spawning and spawning gonad stages, appeared from October indicating that the spawning season may start from sometime after October. To get more accurate reproduction results of Alfonsino in the SEAFO Area, there is a need to collect data for a few more years.

**Table 6:** Annual number of fish by maturity stages of Alfonsino (*B. splendens*) in the SEAFO CA for 2010 to 2013.

Year	Month	Maturity stage				
		Immature	Developing	Pre-spawning	Spawning	Spent
2010	Sep	882	66	6	0	0
	Oct	33	6	0	0	0
	Nov	0	20	0	0	0
2011	Jan	95	239	0	0	0
	Sep	37	1	0	0	0
	Oct	18	20	12	0	0
	Nov	26	77	34	2	0
2012	May	16	7	0	0	0
	Jun	452	32	0	0	0
	Nov	29	40	3	5	0
2013	Oct	42	4	0	0	0
	Nov	28	25	3	0	0



**Figure 14:** The proportion of maturity stage of Alfonsino in the SEAFO CA for 2010-2013. (1: immature, 2: developing, 3: pre-spawning, 4: spawning, and 5: spent).

### 3.6 *Natural mortality*

There is no available information and data in the SEAFO CA.

### 3.7 *Feeding and trophic relationships (including species interaction)*

There is no available information and data in the SEAFO CA.

### 3.8 *Tagging and migration*

No tagging and migration studies on Alfonsino have been done in the SEAFO Area.

## 4 **Stock assessment**

### 4.1 *Available abundance indices and estimates of biomass*

There is no available information and data in the SEAFO CA

### 4.2 *Data used*

The data used are derived from fishing hauls in which total catch of *Beryx splendens* represented more than 80% of the total catch of *P. richardsoni* and *Beryx splendens* caught by Korean trawls around the Valdivia Bank. This criterion is used since the catches of these two species are negatively correlated, i.e., when one of these two species occurs in the haul the other does not.

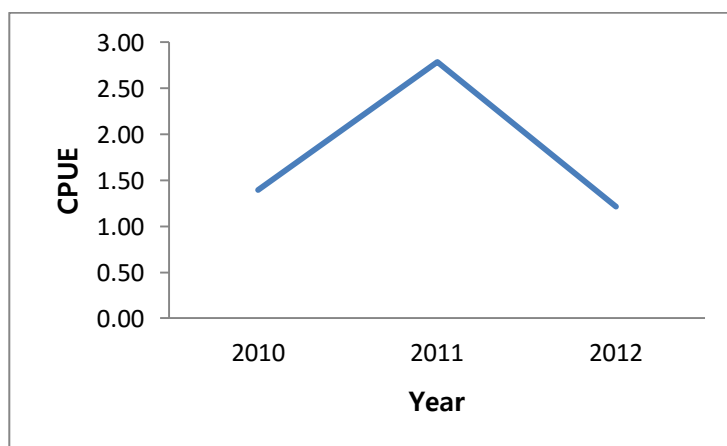
In each haul the estimate of CPUE of *Beryx splendens* is represented as the ratio of total catch of the species by the haul duration time.

### 4.3 *Methods used*

Nominal CPUE was used to derive a perception of the development of the fishery in the period 2010-2012.

### 4.4 *Results*

The progression in CPUE over time showed marked variability and no clear trend.



**Figure 14:** Plot of nominal CPUE (Catch per hour) for 2010-2012.

### 4.5 *Discussion*

It should be recognized that the data available for assessment is extremely sparse and represents a short time series. The perception of the stock as described is based on only 3 years of catch and effort data. Length frequency distributions could not be derived based on the insufficient length samples submitted to the Secretariat.

#### 4.6 Conclusion

Catch and effort data per haul on Alfonsino were collected by Korean vessels for only 3 years from 2010 to 2012. These data, although short in series, can be used to get a perception of the trend in nominal CPUE.

#### 4.7 Biological reference points and harvest control rules

No biological reference points could be determined and the SC suggests using an empirical Harvest Control Rule (HCR) to regulate the fishery until the data situation is improved. A candidate HCR consists of the average catch of the last three years to which a 20% uncertainty cap is applied.

ICES Harvest Control Rules, category 5: Data poor stocks (only landings data). Calculation of average catch for three years (2010- 2012) as  $C_{Y-1}$

$$\begin{aligned} C_{Y-1} &= \frac{\sum_{y=3}^{y-1} C_i}{3} \\ &= (159+ 165+172)/3 \\ &= 165 \end{aligned}$$

And calculation of the catch advise as

$$\begin{aligned} C_{Y+1} &= 0.8 \times C_{Y-1} \\ &= 0.8 \times 165 \\ &= 132t \end{aligned}$$

Incidental mortality and by-catch of fish and invertebrates

#### 5.1 Incidental mortality (seabirds, mammals and turtles)

No by-catch of seabirds, mammals and turtles were reported.

#### 5.2 Fish by-catch

In the case of Southeastern Atlantic fisheries, Alfonsino is often found in association with other fish species as, for example, in 2011 the following species (per ton) were caught; Boarfish (*Capros aper*) 14 tonnes, Blackbelly rosefish (*Helicolenus actylopterus*) 3 tonnes, Imperial blackfish (*Schedophilus ovalis*) 6 tonnes, Oilfish (*Ruvettus pretiosus*) 8 tonnes, and Silver scabbardfish (*Lepidopus caudatus*) 4 tonnes.

#### 5.3 Invertebrate by-catch including VME taxa

The main method used to catch Alfonsino is with bottom trawling. Trawling for this species on seamounts impacts habitat (Clark and O'Driscoll, 2003, Koslow et al., 2001), but the precise impact of this on invertebrate populations on the seamounts is unknown.

#### 5.4 Incidental mortality and by-catch mitigation methods

By-catch mitigation measures to reduce incidental mortality for seabirds, mammals and turtles are in place (see current conservation measures in section 6).

#### 5.5 *Lost and abandoned gear*

There was no reported lost and abandoned gear from the trawl fisheries for Alfonsino in the SEAFO CA.

#### 5.6 *Ecosystem implications and effects*

The main method to catch Alfonsino is bottom trawling and repeated trawl disturbances will alter the benthic community on a seamount. However, the precise impact of such trawling on the ecosystem as a whole is unknown. (see Conservation Measure 18-10).

#### Current conservation measures and management advice

There have been no landings of alfonsino in the last 3 years (including 2016). The SC was therefore unable to apply the HCR previously proposed by the SC and accepted by the Commission.

Alfonsino is a seamount-associated species that form aggregations, and the experience worldwide is that serial depletion of aggregations at different seamounts can happen. In the recent fisheries for the species in SEAFO the fishery was concentrated on a single seamount summit, the Valdivia Bank, where it was mainly a bycatch in the target fishery for pelagic armourhead. The only information available from 2015 is the limited observations from the RV Dr Fridtjof Nansen survey noting that only scattered specimens of the species occurred in the main fishing area.

It is also recognized that the last three year's interruption in the exploitation has provided potential for recovery of the resource in the main fishing area on Valdivia Bank. There is however not enough information from any source to determine with certainty whether recovery has happened or not happened.

The SC however recognised that without future fishery data nor survey information the basis for providing scientific advice will deteriorate. The SC therefore discussed what advisory option would be most appropriate while maintaining the potential for data provision from a fishery. It must also be taken into account that the alfonsino is mainly a bycatch and that the catches will depend on the activity level in the target fishery for armourhead.

The SC considered the TAC level advised in 2013 as precautionary at that time. Considering no fishing pressures last 3 years and development of the resource, The SC recommends a TAC of 200 t (status quo) for the SEAFO CA, of which a maximum of 132 tonnes may be taken in Division B1.

Other Conservation Measures that are applicable to this fishery can be seen in Table 7.

**Table 7:** Other Conservation Measures that are applicable to this fishery.

Conservation Measure 04/06	On the Conservation of Sharks Caught in Association with Fisheries Managed by SEAFO
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Conservation Measure 14/09	To Reduce Sea Turtle Mortality in SEAFO Fishing Operations.
Conservation Measure 25/12	On Reducing Incidental Bycatch of Seabirds in the SEAFO Convention Area
Conservation Measure 30/15	On the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area
Conservation Measure 31/15	On Total Allowable Catches and related conditions for Patagonian Toothfish, orange roughy, Alfonsino and Deep-Sea Red Crab in the SEAFO Convention Area in 2014

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**APPENDIX XI – Stock Status Report – Pelagic armourhead**

**STATUS REPORT**

*Pseudopentaceros richardsoni*

Common names: Pelagic armourhead, Southern boarfish



**2016**  
**Updated 14 October 2016**

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## 1 Description of the fishery

### 9.7

#### 1.1 Fishing fleets and fishing gear

In recent years the Korean trawl fishery was the only fishery targeting the pelagic armourhead in the SEAFO CA. It started in 2010 but due to the depletion of the pelagic armourhead stock, the fishery finished in 2014. During the period 2010-2013 two fishing vessels participated in the fishery, F/V Adventure and F/V Dongsan Ho.

Although primarily considered as a midwater trawl fishery, 94% of the tows recorded by onboard observers were classified as “Demersal”. Whether or not these trawls were bottom trawls remains uncertain, and this is an issue that still requires clarification.

At the SEAFO CA the F/V Adventure stern trawler operated with the following fishing gears (Table 1 and Figs. 1- 4 provide the specifications of the fishing gears):

**HAMPIDJAN NET** is a bottom otter trawl with two-piece nets of 66 m in length. The head rope is 48 m long; ground rope is 50 m; the height, width and girth of the net are 5.5 m, 30 m and 100 m, respectively. The cod-end mesh size is 120 mm. The ground gear is 50 m in length and 903 kg in weight, and the float is 1,018 kg.

**MANUFACTURED NET** is a four-piece net with a overall length of 66.9 m. The lengths of the head rope and ground rope are 59.0 m and 77.9 m, respectively. The height, width and girth of the net are 5.5 m, 200 m and 83 m, respectively. The cod-end mesh size is 120 mm. The ground is 77.9 m in length and the weight of the ground is 2,068 kg. The float is 913.200 kg with the floating rate of 44%.

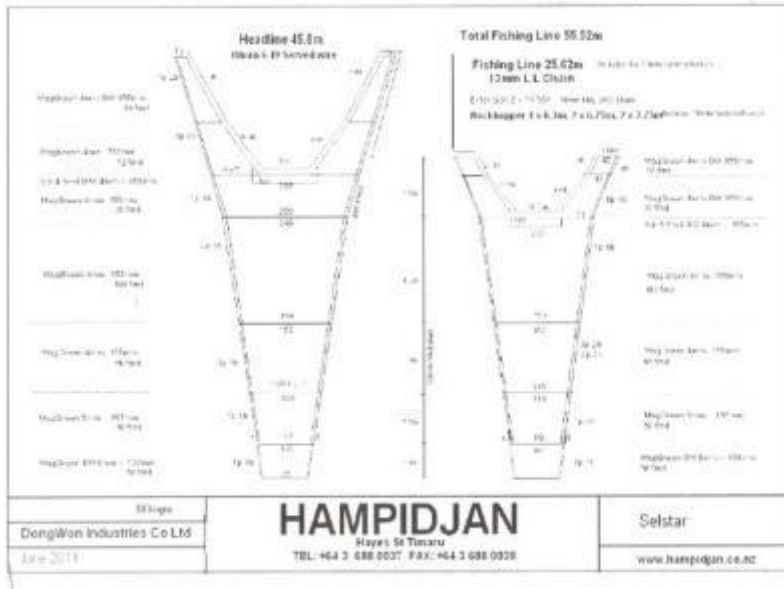
**MIDWATER NET** is 210 m long. The lengths of head rope and ground ropes are 93.6 m. The height and width of the net are 70.0 m and 240-260 m, respectively. The girth of the net is 816 m and the cod-end mesh size is 120 mm.

**Table 1:** Specifications of the fishing gears available at F/V Adventure.

Gear Specifications		HAMPIDJAN NET bottom trawl	MANUFACTURED NET bottom trawl	MIDWATER NET
Otter board	type	VRS-TYPE	VRS-TYPE	VRS-TYPE
	material	Steel	Steel	Steel
	size (mm)	2,300 x 4,030	2,750 x 4,900	1,854 x 3,818
	weight (kg)	3,930	4,320	2,000
	under water weight (kg)	2,619	2,473	1,145
Trawl Net	purpose	bottom fishing (figure1)	bottom fishing (figure2)	mid-water fishing (figure3)
	net length overall(m)	66	66.9	210.0
	head rope (m)	48	59.0	93.6
	ground rope (m)	50	77.9	93.6
	net height (m)	5.5	5.5	70
	net width (m)	30	200	240~260
	net girth (m)	100	83	816
	mesh size (mm)	120	120	120

At the SEAFO CA F/V Dongsan Ho, a stern trawler, operated with mid-water KITE trawl and the bottom trawl net PE Net. The mid-water KITE trawl (Fig. 4) includes ropes and has

kites at the upper part and chains at the lower part . The height of the net’s gate is approximately 50 m, and the total length is around 280 m. When net is settled, it sinks underwater and the sinking depth of the net is controlled by the wire ropes. The upper and lower parts of the bottom trawl net PE Net have attached plastic buoys and rubber balls respectively. As in the case of KITE gear the wire ropes control the sinking depth of the settled gear.



**Figure 1:** Diagram of HAMPIDJAN NET of F/V Adventure.

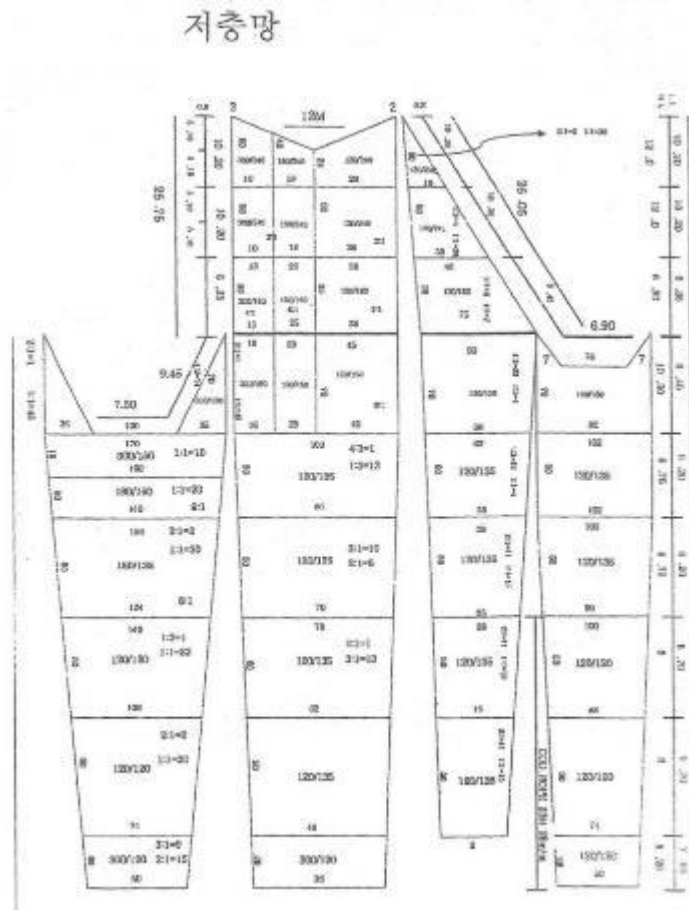


Figure 2: Drawing of the Custom Manufactured Bottom Trawl Net of F/V Adventure.

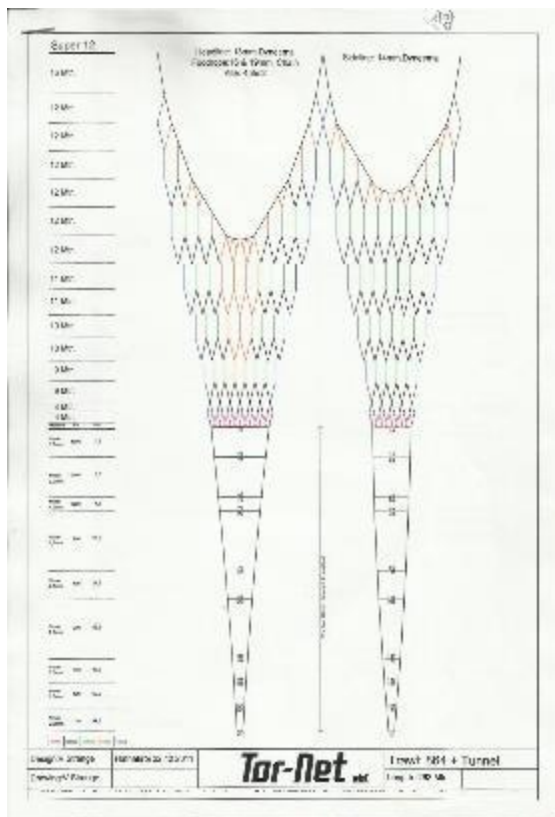


Figure 3: Drawing of mid-water trawl net of F/V Adventure.

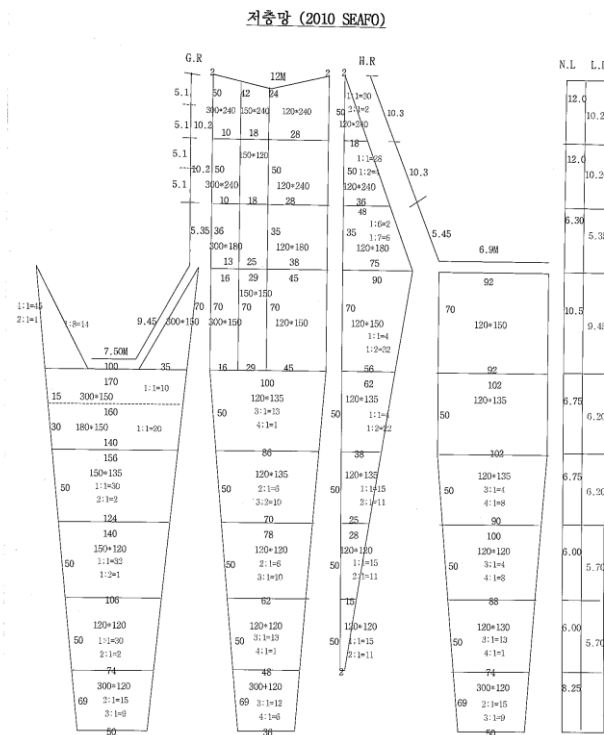
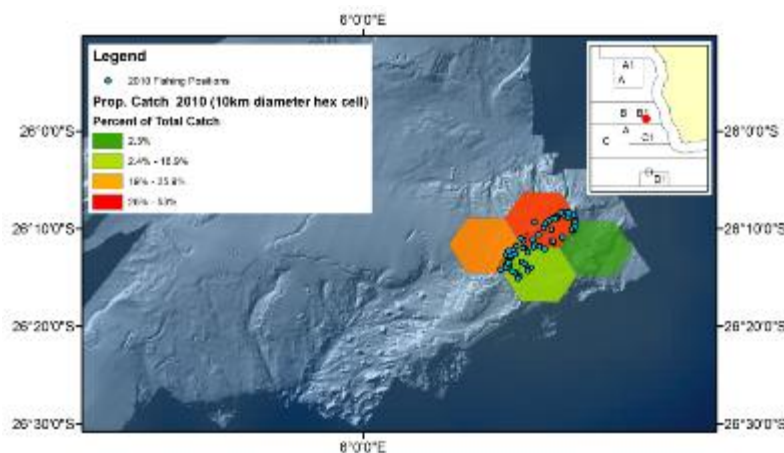


Figure 4: Drawing of mid-water KITE trawl of F/V Dongsan Ho.

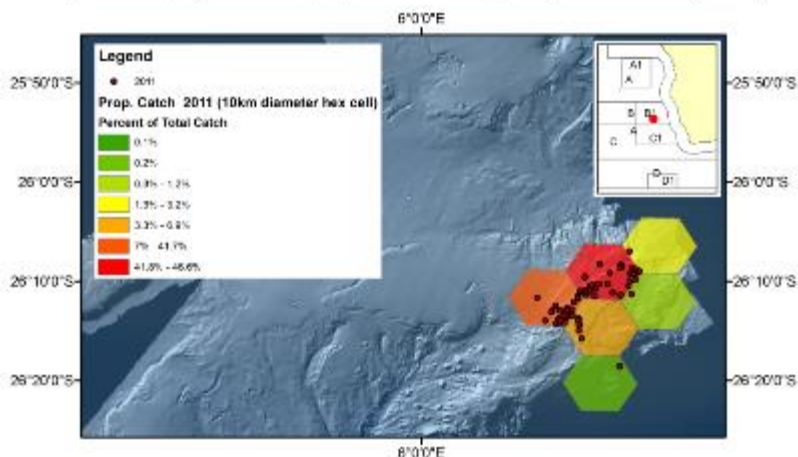
1.2 Spatial and temporal distribution of fishing

During the period 2010-2013 the Korean trawl fishery targeting pelagic armourhead took mainly place at the southern and northern parts of the Valdivia Bank, in Division B1 of the SEAFO CA (Figure 5). In addition in 2013, a single haul was also conducted at North Walvis Ridge in Subdivision B1 (Table 1, Fig. 5, lower).

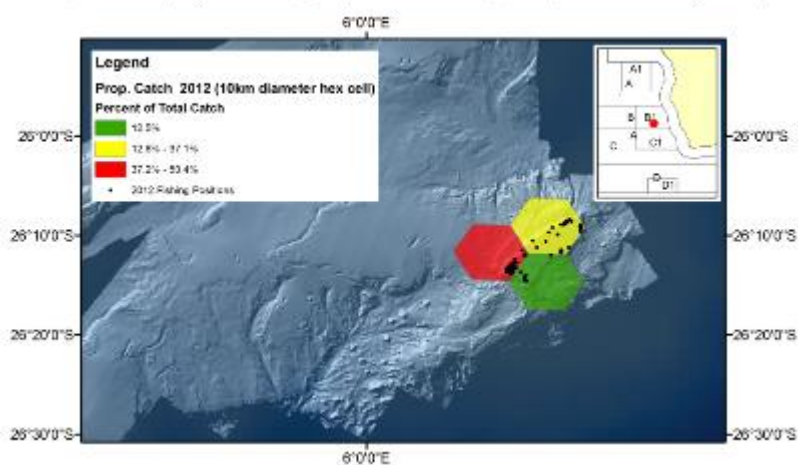
At the Valdivia Bank, the fishing grounds of the Korean fishery were primarily located in a small area of about 200 km<sup>2</sup>.



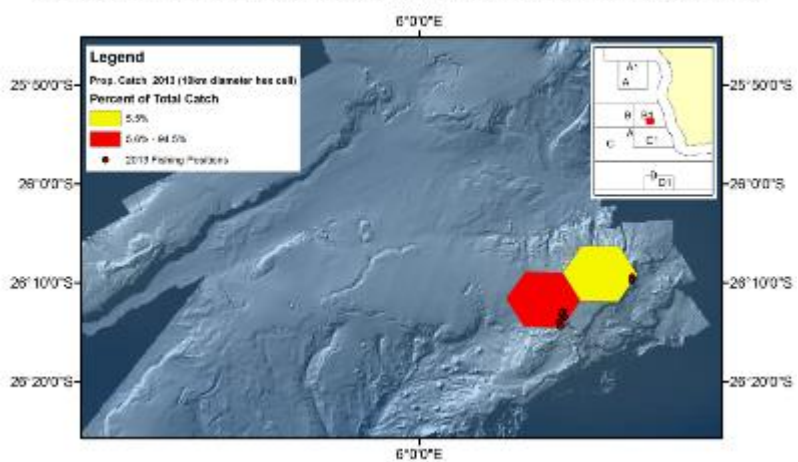
Proportion Catch of pelagic armourhead (*Pseudopentaceros richardsoni*) in 2011 (10km diameter hexagonal cells)



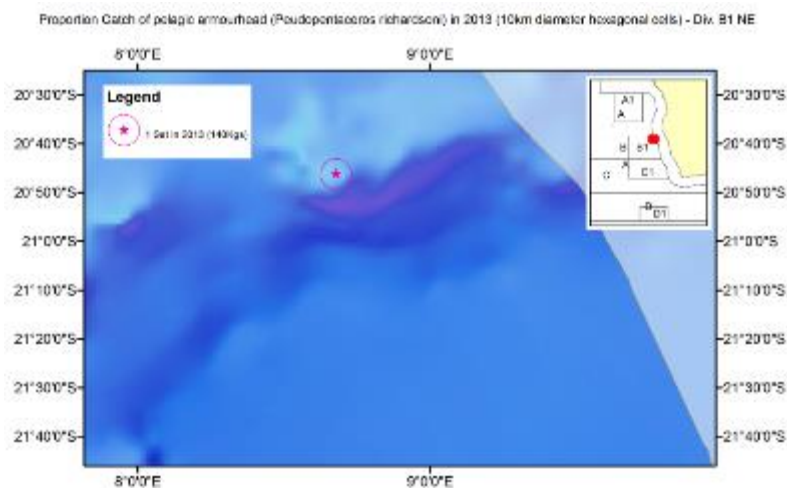
Proportion Catch of pelagic armourhead (*Pseudopentaceros richardsoni*) in 2012 (10km diameter hexagonal cells)



Proportion Catch of pelagic armourhead (*Pseudopentaceros richardsoni*) in 2013 (10km diameter hexagonal cells)







**Figure 5:** Spatial distribution of fishing positions and reported catches of pelagic armourhead (*P. richardsoni*) aggregated by 10km diameter hexagonal cells, 2010-2013. Lower map shows the single fishing position in the northeastern seamount of B1 (northeastern Walvis Ridge) reported in 2013. Data from observer reports submitted to SEAFO until Sept. 2014.

**Table 1:** Number of trawl hauls by year and SEAFO region (ref. Fig. 5).

Year	Valdivia Bank	North Walvis Ridge
2010	63	
2011	88	
2012	117	
2013	9	1

### 1.3 Reported retained catches and discards

Table 2 presents the annual catches and by-catches of pelagic armourhead by country, fishing gear and SEAFO CA sub-divisions since 1976. At the early years the main fishing countries were:

Russia operating with bottom trawls (late 1970s and 1993);

Ukraine operating with bottom trawls (mid-1990s);

Namibia and South Africa both operating with bottom trawls (mid-1990s);

South Korea primarily operating with mid-water trawl (2010-2013).

The highest annual catches were recorded by Russia with 1,273 and 1,000 t in 1977 and 1993, respectively, and by Korea with 688 t in 2010.

**Table 2:** Reported catches (tonnes) of pelagic armourhead (*Pseudopentaceros richardsoni*) from the SEAFO CA. Data reported by SEAFO CPs and other flag states reporting to SEAFO, and from FAO.

Nation	Namibia	Russia	Ukraine	South Africa	Spain	Cyprus	Rep. of Korea
Management Area	B1	B1	UNK	B1	B1	UNK	B1
Fishing method	BT	BT	BT	BT	BT / LL	BT	MT

Catch details	(t)		(t)	(t)	(t)		(t)		(t)	
	Catch	Discard	Catch	Catch	Catch	Discard	Catch	Discard	Catch	Discard
1976			108							
1977			1273							
1978			53							
1993			1000	435 FAO						
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	688 0
2011	N/F		N/F	N/F	N/F		N/F		N/F	135 0
2012	N/F		N/F	N/F	N/F		N/F		N/F	152 <1
2013	N/F		N/F	N/F	N/F		N/F		N/F	13 0
2014	N/F		N/F	N/F	N/F		N/F		N/F	N/F
2015	N/F		N/F	N/F	N/F		N/F		N/F	N/F
2016***										

N/F = no fishing

UNK = Unknown

Blank fields = No data available.

\*\*\* Provisional (Aug 2016)

FAO = values from FAO

TB = Bottom Trawl

TM = Mid-water Trawl

LL = Longline

#### 1.4 IUU catch

IUU catches are unknown. Historically, fishing vessels have reported IUU fishing activity in the SEAFO CA to SEAFO secretariat. The reports may have been incomplete, and the extent of such activity and impacts on pelagic armourhead are unknown. In recent years no reports or other information indicating IUU fishing were received, so it is believed that IUU activity have stopped or become much reduced.

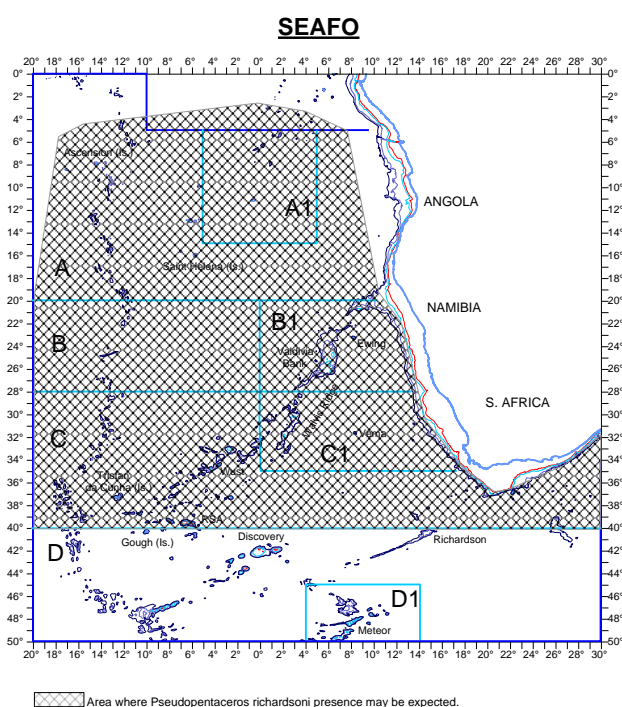
## 2 Stock distribution and identity

### 9.8

The pentacerotid *Pseudopentaceros richardsoni* (Smith 1844) is a southern circumglobal, benthopelagic species. The species inhabits the outer shelf and upper continental shelves, as well as, seamounts and underwater ridges (100-1000 m) between 0 and 1 000 m depth (Heemstra, 1986), e.g. Tristan de Cunha, on the Walvis Ridge and seamounts off South Africa (Southeast Atlantic); south of Madagascar (Western Indian Ocean) as well as in southern Australia, New Zealand and the Southeast Pacific.

In the SEAFO CA, the potential distribution area of the species and adjacent waters is shown in Figure 6. It is unlikely that the species is abundant south of about 40°S, i.e. in Division D.

*P. richardsoni* populations particularly the adult exploited fraction, have patchy distributions. Adult fraction tend to occur in a restricted depth *stratum* on the summit of seamounts and oceanic banks. The species recruit to the summit of the seamounts after approximately 4 years of pelagic life and thereafter aggregates.



**Figure 6:** Potential geographical distribution of *P. richardsoni* in the SEAFO CA and adjacent waters (source: Species profile on the SEAFO website referring to several sources).

### 3 Data available for assessments, life history parameters and other population information

#### 3.1 Fisheries and survey data

Geo-referenced data on catch and effort were available from haul-by-haul observer reports for the entire time-series of the Korean fishery (2010-2013), but logbook data were not available.

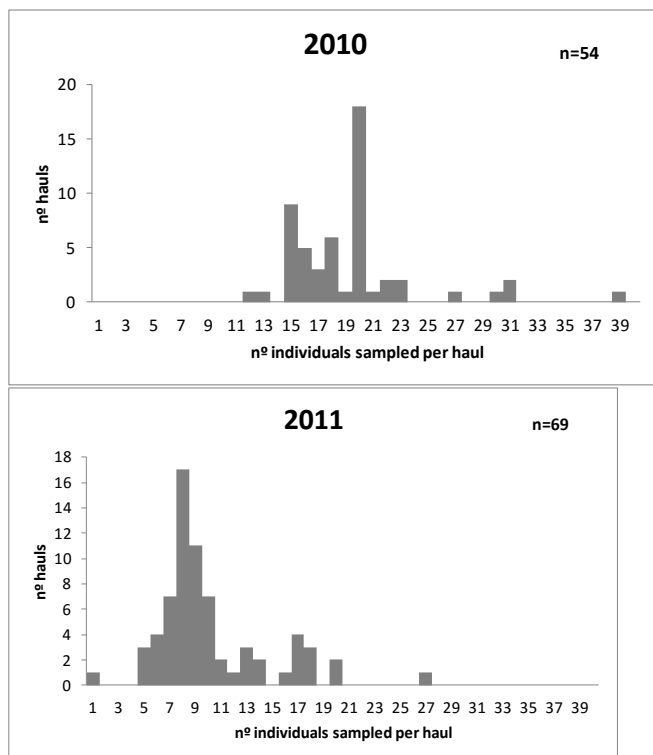
During the investigation of selected SEAFO seamounts in Jan-Feb 2015 by the RV Dr Fridtjof Nansen (FAO, 2016) pelagic armourhead were recorded in trawl catches and

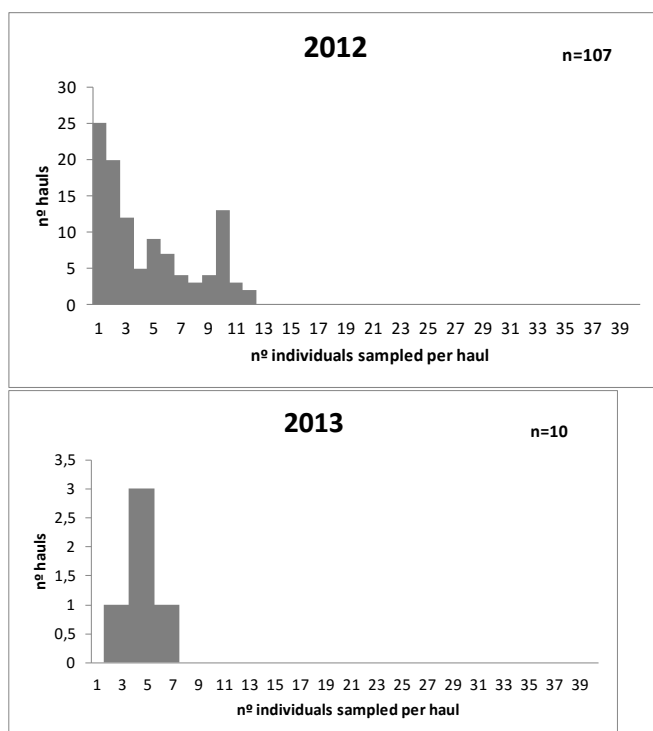
videos, and attempts were made to record aggregations of these species by acoustics. Small aggregations were observed in videos on a summit knolls in Wüst, and a single aggregation in Valdivia Middle. Scattered individuals occurred on the upper slope of Vema. The main former fishing area Valdivia Bank appeared impoverished with only scattered individuals and no acoustic recordings.

### 3.2 Length data and length frequency distributions

In 2014 the SC reviewed length data collected by observers on Korean fishing vessels. The number of individuals measured was considered insufficient to derive reliable length compositions of the catches. As a consequence, the length frequency distributions and length statistics (e.g. ranges and mean lengths) presented in 2013 or earlier SC reports were considered invalid. However, if sufficient length data were available, cohort analyses to perceived stock status based on length could be adopted.

The number hauls versus the number of fishes measured at each fishing haul are presented in Figure 7 and Table 3. Although most trawl tows have been sampled the number of individual measured per haul was clearly insufficient. This number has even decreased in the latter years





**Figure 7:** Frequency distributions of sample sizes for individual trawl tows, 2010-2013 in the Valdivia Bank trawl fishery for pelagic armourhead. The source is observer reports submitted to SEAFO until September 2014. n- number of tows sampled by observers.

**Table 3:** Total number of trawl tows sampled per year, annual mean, minimum, maximum number of fishes measured per trawl tow. The mean number of individuals measured per tonne is presented in the last column. (Data presented are official data submitted to SEAFO till Sept. 2014).

Year	No. of trawl tows sampled	Mean ind. sampled/tow	Min. ind. sampled/tow	Max. ind. sampled/tow	Mean ind. sampled/tonne
2010	54	19.3	12	39	0.03
2011	69	10.1	1	27	0.09
2012	107	4.5	1	12	0.03
2013	10	4.5	2	7	0.35

### 3.3 Length-weight relationships

The weight-length relationship of pelagic armourhead (for the two sexes combined) derived from observed data collected between 2010–2012 was:  $W = .016 L^{3.048}$  ( $r^2 = .96$ ).

### 3.4 Age data and growth parameters

There is no available information for SEAFO CA.

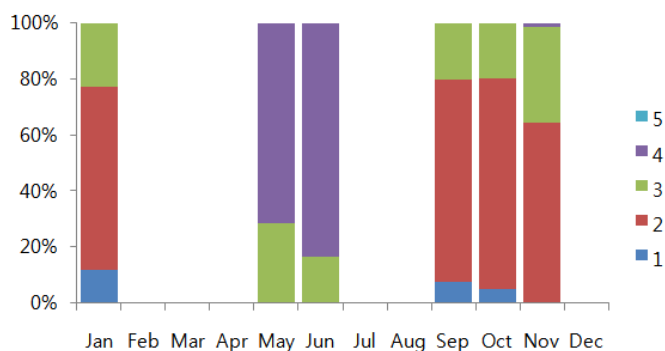
### 3.5 Reproductive parameters

For the period 2010 – 2012, the number of fishes by maturity stage and month are shown in Table 4. High proportions of pre-spawning and spawning stages were observed (Fig. 8).

Although for the period 2010-2012 fishing activity in SEAFO CA has been restricted to May and June, data suggest that spawning is likely to occur after May, probably before September. If this is the case at the SEAFO CA the spawning period is different from that in the Southwest Indian Ocean, admitted to occur between October and December (López-Abellán et al. 2007).

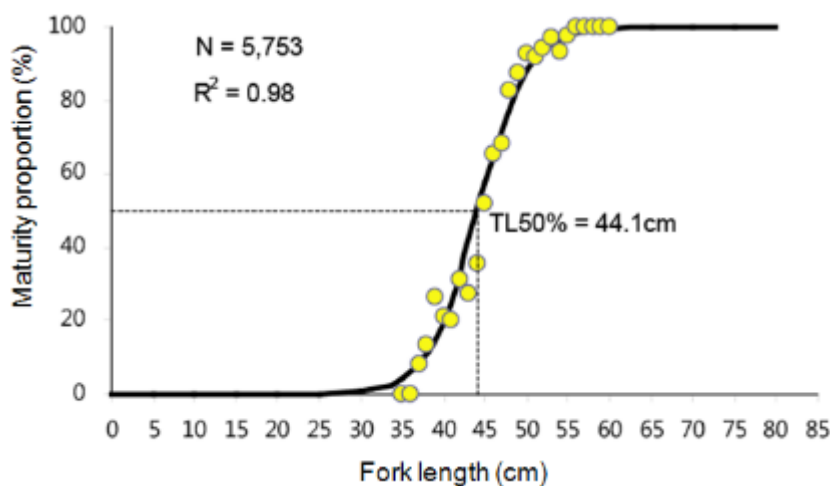
**Table 4:** Annual number of fish by maturity stage of Pelagic Armourhead (*Pseudopentaceros richardsoni*) in the SEAFO CA for 2010-2012. Source: observer samples from Korean fishery.

Year	stage Month	Maturity				
		Immature	Developing	Pre-spawning	Spawning	Spent
2010	Sep	0	504	159	0	0
	Oct	0	437	107	0	0
	Nov	0	84	26	0	0
2011	Jan	14	78	27	0	0
	Sep	59	75	4	0	0
	Oct	30	26	13	0	0
	Nov	0	16	27	2	0
2012	May	0	0	38	96	0
	Jun	0	0	69	352	0



**Figure 8:** Pelagic Armourhead (*Pseudopentaceros richardsoni*) in the SEAFO CA for 2010-2012 - Proportion of specimens by maturity stage by month (1: immature, 2: developing, 3: pre-spawning, 4: spawning and 5: spent).

The adjustment of the maturity ogive to the reproductive data indicates 44.1 cm FL as size of first maturity (Fig. 9).



**Figure 9:** Pelagic armourhead (*Pseudopentaceros richardsoni*) - Valdivia Bank (SEAFO CA Subdivision B1). Proportion mature specimens versus fork length in cm

### 3.6 Natural mortality

Empirical natural mortality for pelagic armourhead were estimated using different methods (Tab. 6). For some methods the species growth parameter estimates ( $K=0.27 \text{ year}^{-1}$ ;  $L_{\text{inf}}=65.1 \text{ cm}$ ; and  $t_0=-0.34 \text{ year}^{-1}$ ) derived for the Southwest Indian Ocean (López-Abellán et al. 2008a) and for Valdivia Bank during the Spanish-Namibian research survey (López-Abellán et al. 2008b) were used. In the Southwest Indian Ocean the maximum observed age of the species was 14 years.

**Table 6:** Empirical natural mortality estimates determined using the Fishmethods R package.

Method	M
Pauly (1980) - Length Equation	0.457
Hoenig (1983) - Joint Equation	0.316
Hoenig (1983) - Fish Equation	<b>0.300</b>
Alverson and Carney (1975)	0.253
Roff (1984)	0.417
Gunderson and Dygert (1988)	0.089

The estimate  $M=0.3$  calculated using the Hoenig's method was considered the most adequate for the species and it was therefore adopted for the subsequent analyses.

### 3.7 Feeding and trophic relationships (including species interaction)

There is no available information for SEAFO CA

### 3.8 Tagging and migration

There is no available information SEAFO CA

## 4 Stock assessment status

The specific spatial distribution of the adult fraction of *P. richardsoni* population favours the use of catch per unit of effort (CPUE) data as indicator of biomass and support the analysis of CPUE temporal trends. Furthermore given the fact that data time series available begins at the start of fishery local depletion model was used as a tool to evaluate the status of the population.

Depletion estimators are widely used to estimate population abundance (Seber, 2002; Hilborn and Walters, 1992). These estimators assume a simple linear relationship between

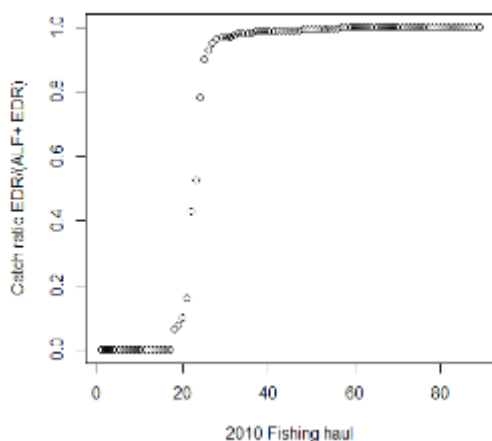
CPUE and cumulative effort (DeLury, 1947) or cumulative catch (Leslie and Davis, 1939). Procedures and discussions to evaluate stock status using depletion models are available in the Scientific Committee reports (SEAFO SC Report 2012 (Pages 21-23); SEAFO SC Report 2013 (Pages 17-18)).

As data available suggest that prior to 2010 the stock was unexploited, the Gulland (1971) method was adopted to estimate maximum sustainable yield (MSY)

#### 4.1 Data used:

Catch and effort data per fishing haul were available for the whole fishery time series. The fishing hauls considered in the analysis were restricted to those in which the total catch of *P. richardsoni* represented more than 80% of the total catch of *P. richardsoni* plus *Beryx splendens*. This criterion was adopted because catches of these two species are highly negatively correlated, i.e., when one of these two species occurs in the haul the other does not occur, as it can be seen for 2010 data (Fig. 11).

For each haul the estimate of CPUE of *P. richardsoni* corresponded to the ratio of total catch of the species by the haul duration.



**Figure 10:** Korean trawl fishery - 2010 estimates of ratio of total catch *Pseudopentaceros richardsoni* by the total catch of *Pseudopentaceros richardsoni* and *Beryx splendens* by haul.

#### 4.2 Methods used

The depletion model was adjusted to the whole data set available for the Korean trawl fishery (2014 was the last year with fishery data available). This model assumes that no recruitment and emigration/immigration to the fishing area occur during a particular season of fishing. So, under these assumptions, catch rates will decline with continued fishing until all the fish have been removed.

The model is adjusted by fitting a linear regression model to CPUE and the corresponding temporal cumulative catches. The total biomass available at the beginning of the season is estimated as the total catch that corresponds to local extinction, i.e. point that intersects the x-axis.

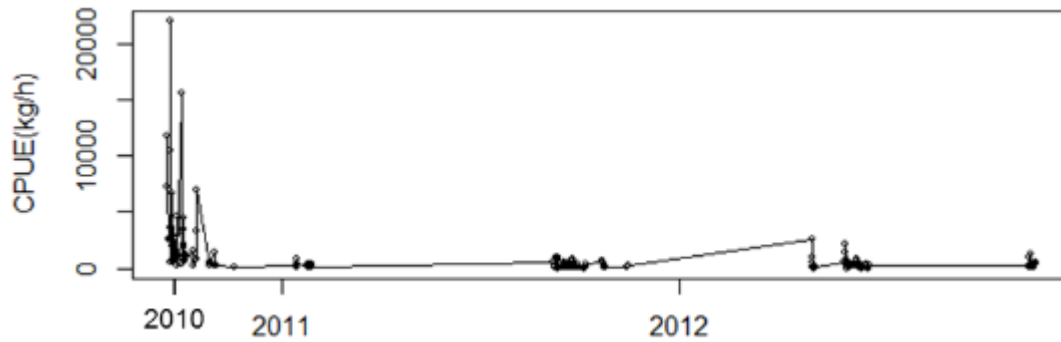
The uncertainties on parameter estimates were determined by bootstrapping; a total of 2000 bootstrap samples were derived from the input data and confidence interval of each parameter using the bootstrap estimates were derived accordingly. MSY estimate was determined based on the estimate of the initial biomass value derived from the depletion



model and following the Gulland approach as  $MSY = 0.5 \cdot B \cdot M$ , where B is unexploited (virgin) biomass and M the estimate of instantaneous natural mortality rate.

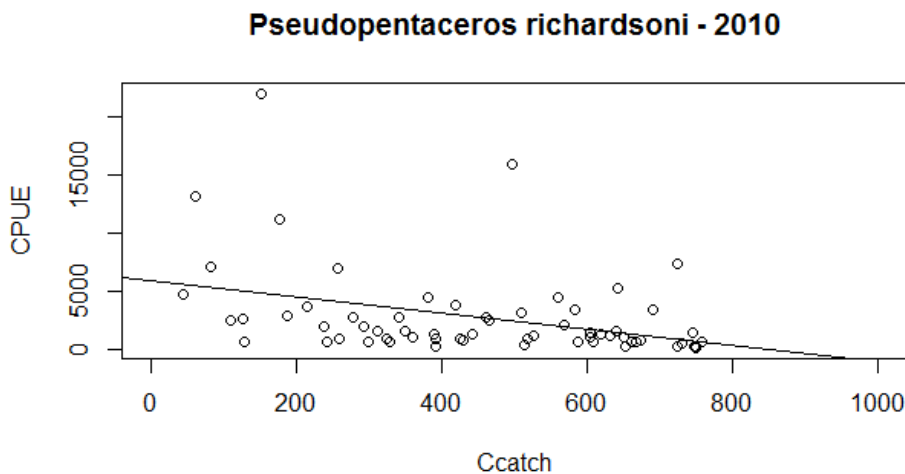
4.3 Results

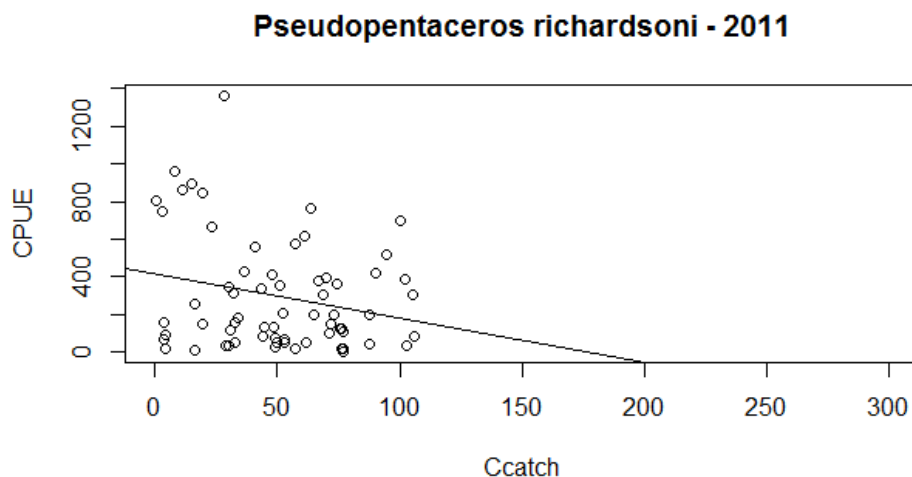
The CPUE time-series showed a big decline from 2010 to 2011 follow by a stability at low levels in 2011, 2012, and 2013 (Fig. 11). In 2014 there was no fishery, hence no data on CPUE.



**Figure 11:** Time-series of catch per unit of effort (CPUE, kg/haul hour), i.e. set-by-set data, for pelagic armourhead from 2010 to 2013. Source: observer reports submitted to SEAFO.

Figure 12 presents the CPUE against cumulative catch and the adjusted regression lines for 2010 and 2011. The 2010 biomass estimate at the beginning of the fishing season (851 t) was considered a proxy of the unexploited biomass. Table 6 shows estimates of the biomass at the beginning of the fishing seasons in 2010 and 2011, as well as the 25% and 75% percentiles.





**Figure 12:** The CPUE against cumulative catch (Ccatch, tonne) of *Pseudopentaceros richardsoni* and the adjusted regression lines for 2010 and 2011. Note the different scales on the CPUE axes.

**Table 6:** Summary statistics of the biomass (t) at the beginning of the fishing season derived from 2000 bootstrap re-sampling estimates.

Year	25 Percentile	Estimate	75 Percentile
2010	751	851	1096
2011	137	176	229

Applying the Gulland method, and assuming a virgin biomass of 851t and 0.3 for  $M$ , the estimate of MSY is 128 t.

#### 4.4 Discussion

The catches of *P. richardsoni* were derived from a directed fishery on Valdivia Bank held in a very small area, where the adults concentrated. Such species spatial distribution pattern make it highly vulnerable to overfishing.

The biomass index derived from onboard observer data Korean fishery targeting pelagic armourhead show a strong decrease (in 2011 the CPUE was approximately 16% of that in 2010). After 2011 the values of CPUE remained stable but very low levels.

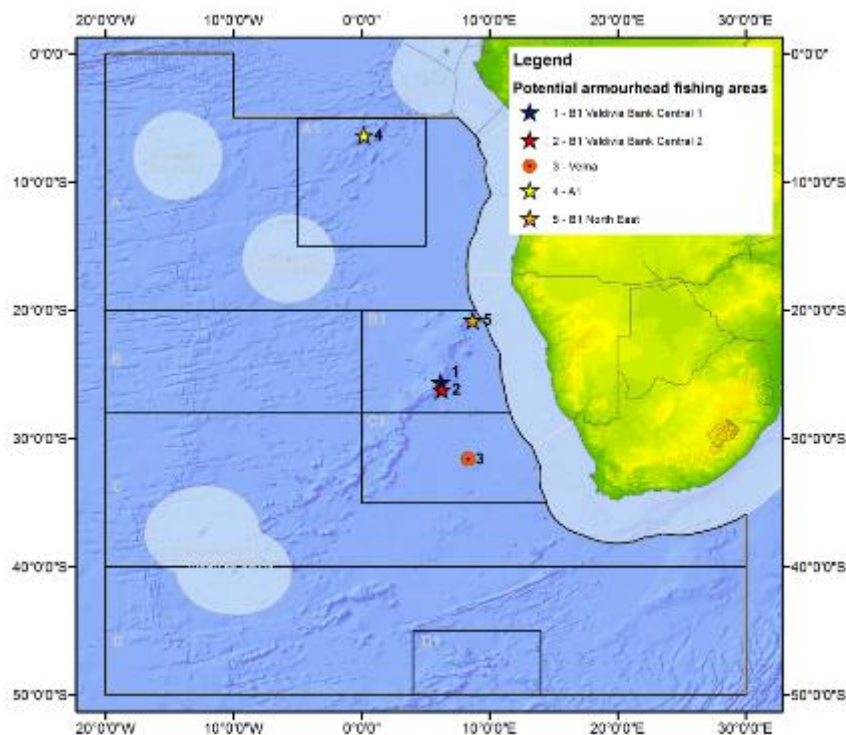
The depletion model run adjusted for the year 2010 showed a significant negative regression slope and the regression explained near 40% of the variance.

Similar perception of the stock development could be depicted from the analysis of CPUE time series and from depletion model. No valid size or age distributions allowing evaluation of trends in size-age structure of the stock through time, as well as, no recruitment indexes were available. However, under the assumption of a 4-year recruitment age, it was expected that until 2015 the entries in the population mainly come from year classes born prior to 2010, i.e. before the fishery started.

***The current perception of the stock fished primarily on the Valdivia Bank is that it is reduced to a low level.***

The 2010-2013 fishery for armourhead was mainly conducted on the Valdivia Bank. A single catch was, however, also reported from a seamount in the northeastern corner of B1. The true distribution of the species in the SEAFO CA is probably wider, but the areas of

suitable character and depth, i.e. shallower than 600m and north of 40°N, are few and widely dispersed (Figure 13). Fisheries expanding into other areas also have to be closely monitored and regulated (Ch 4.7).



**Figure 13:** Bathymetry of the SEAFO CA and locations with bottom depths of 600m or less

There is no information on recruitment, and it is not known whether the concentrations of the species constitute a self-sustaining population or are sustained by immigration/influx of larvae and juveniles from other areas. Furthermore, it is unknown if the 2013 biomass estimate on Valdivia Bank was above or below a level at which recruitment is impaired.

In recent years, i.e. 2014 onwards, there is no further information that allows to perceive the status of the adult population in Valdivia Bank.

## 5 Incidental mortality and by-catch of fish and invertebrates

Incidental mortality (seabirds, mammals and turtles)

There are no reports of incidental bycatches of birds, mammals and turtles in the armourhead fishery.

### 5.1 Fish by-catch

Observer reports document that by-catch species in the pelagic armourhead fishery on Valdivia Bank were blackbelly rosefish, imperial blackfish, oilfish, Cape bonnetmouth, and silver scabbardfish. Among these alfonso, blackbelly rosefish, imperial blackfish, and oilfish were the most abundant species (Table 7).

Minor catches of Japanese mackerel (*Scomber japonicas*) (50 t in 2010), Cape horse mackerel (*Trachurus capensis*), and the longspine bellowfish (*Notopogon xenosoma*) were also recorded in the Korean observer reports, but it is uncertain whether these species occurred in the armourhead fishery. The identification of the latter species is also uncertain.

**Table 7:** By-catch from Pelagic Armourhead / southern boarfish (*Pseudopentaceros richardsoni*) fishery.

	2010	2011	2012	2013
Species (FAO code)	B1	B1	B1	B1
BRF	161	42	35	4
HDV	24	35	24	<1
OIL	5	13	7	<1
EMM	11	2	<1	0
GEM	0	0	<1	0
SVS	30	15	2	0

BRF: Blackbelly rosefish (*Helicolenus mouchezi*); HDV: Imperial blackfish (*Schedophilus ovalis*); OIL: Oilfish (*Ruvettus pretiosus*); EMM: Cape bonnetmouth (*Emmelichthys nitidus*) and PRP: Roudi escolar (*Promethichthys prometheus*)?, SVS: silver scabbardfish (*Lepidotus caudatus*).

### 5.2 VME indicator incidental catch

For the Korean armourhead fishery on Valdivia Bank observers recorded 0.4 kg of VME indicator species in 2013 and less than 1 kg in previous years of the 2010-2013. Catches never exceeded the agreed SEAFO threshold levels.

### 5.3 Incidental and bycatch mitigation methods

There are no technical mitigation measures implemented for the armourhead fishery.

### 5.4 Lost and abandoned gear

There were no reported lost and abandoned gear resulting from the armourhead fishery

### 5.5 Ecosystem implications and effects

There is no formal evaluation available for this fishery.

## 6 Biological reference points and harvest control rules

Apart from the provisional estimate of MSY=128 t (Ch. 4.4), no reference points have been estimated and found to be valid. The main reason is the shortage of basic data to carry out assessments.

In 2014 SC recommended that a harvest control rule be implemented and suggested as a candidate HCR the following:

$$TAC_{y+1} = \begin{cases} TAC_y \times (1 + \lambda_u \times slope) & \text{if } slope \geq 0 \\ TAC_y \times (1 + \lambda_d \times slope) & \text{if } slope < 0 \end{cases}$$

Where 'Slope' = average slope of the Biomass Indicator (CPUE) in the recent 5 years and ;

$\lambda_u$  :TAC control coefficient if slope > 0 (Stock seems to be growing) :  $\lambda_u=1$

$\lambda_d$  :TAC control coefficient if slope < 0 (Stock seems to be decreasing) :  $\lambda_d=2$

The TAC generated by this HCR is constrained to  $\pm 5\%$  of the TAC in the preceding year.

## 7 Current conservation measures and management advice.

The TAC advised in 2014 was derived using the average of the catches in 2011 and 2012. This is a simplistic approach not based on stock assessments or stock trend indices, hence the resulting TAC advice will be uncertain. Currently, due to the interruption of the fishery, the recommended and accepted HCR cannot be applied, nor the average of recent catches as in 2014. Due to the lack of recent fishery data there is even greater uncertainty than in 2014.

Prior to the interruption of the fishery, the catch per unit of effort had declined to a low level. The survey in 2015 did not detect concentrations of armourhead in the previous fishing area at that time. It was expressed that the absence of a fishery has provided a potential for recovery. Despite the fishing opportunity available in the past 3 years, there was no fishery, and this lack of activity has not been explained.

Due to the uncertainties explained above, SC members expressed different views on the TAC advice for 2017-2018 for the SEAFO CA. The agreed advice is a TAC of 135 tonnes. This level is slightly lower than that derived in 2014, hence possibly more precautionary. It must be emphasized that the state of the stock is unknown.

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**APPENDIX XII – Results from exploratory fishing conducted within the SEAFO CA during 2015**

**Report of the Japanese exploratory fishings by FV Shinsei-maru No. 3 in 2015 and 2016**

National Research Institute of Far Seas Fisheries (NRIFSF)  
Japan Fisheries Research and Education Agency, Japan

October, 2016

Abstract

FV Shinsei maru No. 3 conducted the exploratory bottom fishings in the new fishing ground in the Discovery seamount area of the SEAFO CA for 10 sets and 4 days each in April 25-28, 2015 and March 2-5, 2016. This is the report of the results of these exploratory fishings. According to the results, it was found that (a) there were negligible amounts of VME species (corals) in two locations (0.01 kg for gorgonian and 0.58 for stony coral respectively) in only 2016, which are less than the threshold values and (b) there are continuous Patagonian toothfish distributions from the existing fishing area to the exploratory fishing area. It was recognized again that the trot bottom longline was the VME safe gear and the exploratory fishing areas (two 1°x1° blocks) in 2015 and 2016 are also recognized as parts of Patagonian toothfish fishing grounds in the Discovery area.

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*Submitted to the SEAFO 12<sup>th</sup> Scientific Committee (Oct. 6-14, 2016) (Windhoek, Namibia)*

## 1. INTRODUCTION

In 2011, existing bottom fishing areas have been identified in response to 2006 UNGA resolution 61/105. This has resulted to split some of fishable sea mountains shallower than 2000m such as Discovery Seamounts into existing and new bottom fishing areas.

There is no clear geographical (seafloor-topological) boundary around Discovery Seamounts so it is considered that fish might move across the boundary of existing and new bottom fishing areas. Furthermore, VME information, fish distribution, detailed sea bed map, etc. in new bottom fishing area will never be known unless fishing activities occur there.

We believe that collecting such primary information in new bottom fishing areas is meaningful and accumulating such information could contribute to achieve the objective of the SEAFO Convention to ensure the long term conservation and sustainable use of fishery resources.

Under such circumstances, the primary objectives of this exploratory fishing are to investigate Patagonian toothfish resources using some part of TAC and to evaluate if this exploratory fishing produces Significant Adverse Impact (SAI) on VME species.

To now four exploratory fishings have completed during 2012-2016 and we had completed reports to 2014. In this document, we will report of results of exploratory fishing for two years (2015-2016).

## 2. EXPLORATORY FISHING PLANS (2015-2016)

The original plans of the exploratory fishing for 2015-2016 are available SEAFO/DOC/SC/05/2014 and SEAFO/DOC/SC/16/2015 respectively. They were approved by the SEAFO Scientific Committee and the annual commission meeting in 2014 and 2015 respectively.

## 3. DATA

Information collected by the observer during the exploratory fishings (2015-2016) is used for this report.



## 4. Results

### 4.1 Periods of the exploratory fishing completed in 2015-2016 (Table 1)

Table 1 Periods of commercial fishing and exploratory fishing by trip in 2015 and 2016

year	Trip no	Commercial fishing operations	Exploratory fishings
2015	1	(2014/11/13) – 2015/1/1-3	No
	2	4/29-6/29	4/25-28 (10 operations in 4 days)
2016	1	2/25-3/1	3/2-5 (10 operations in 4 days)
	2	3/22-4/21	No
	3	6/19-8/13	No

### 4.2 Areas of the exploratory fishing planned and completed

#### (1) 2015

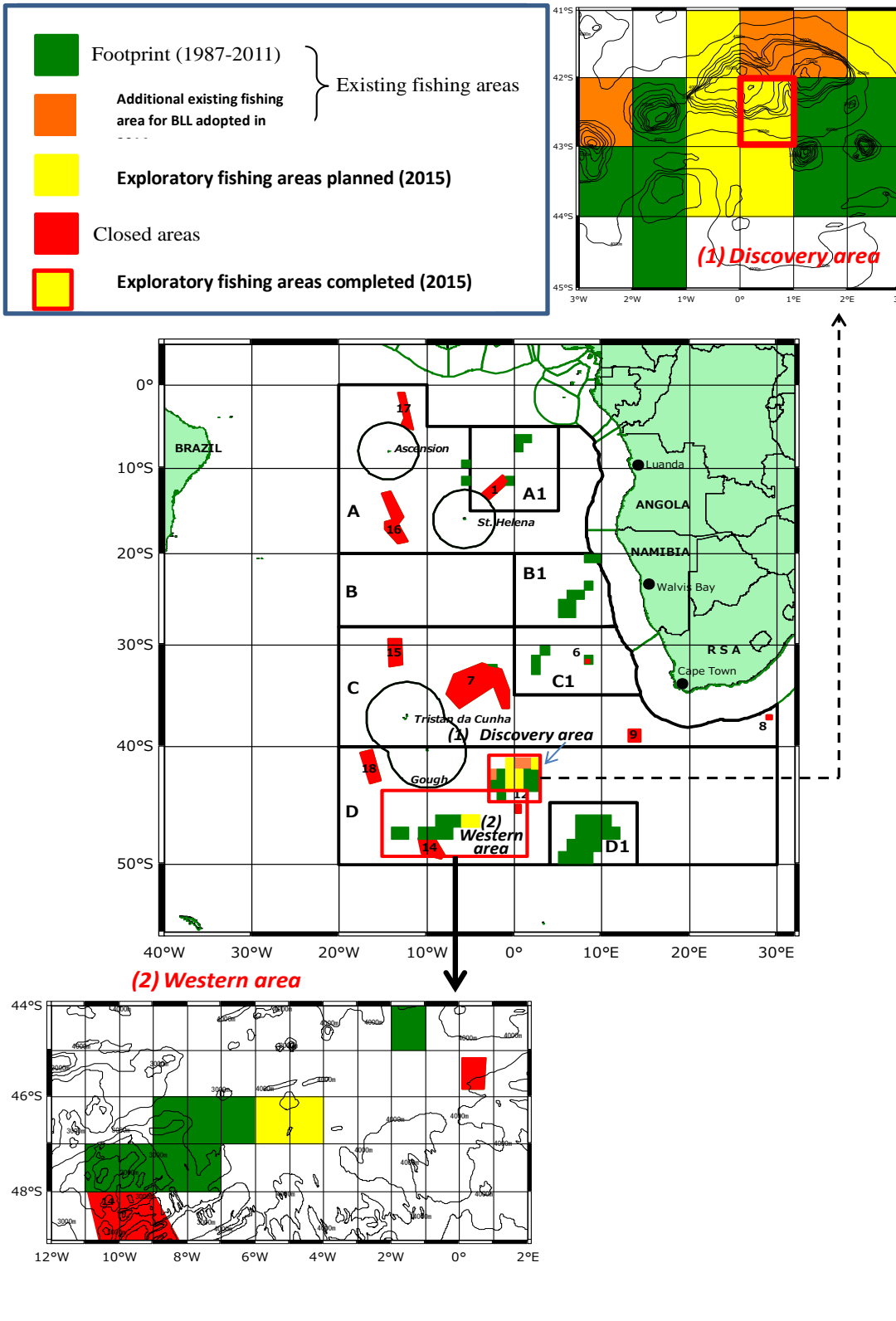
9.9

The 2015 exploratory fishing areas were planned for six 1°x1° areas in the Discovery seamount and two in the western area, which are indicated by yellow markers in Box 1 (page 4). Among six blocks, one was completed by the exploratory fishing in 4 days (April 25-28, 2015), which is indicated by yellow marker with the red frame.

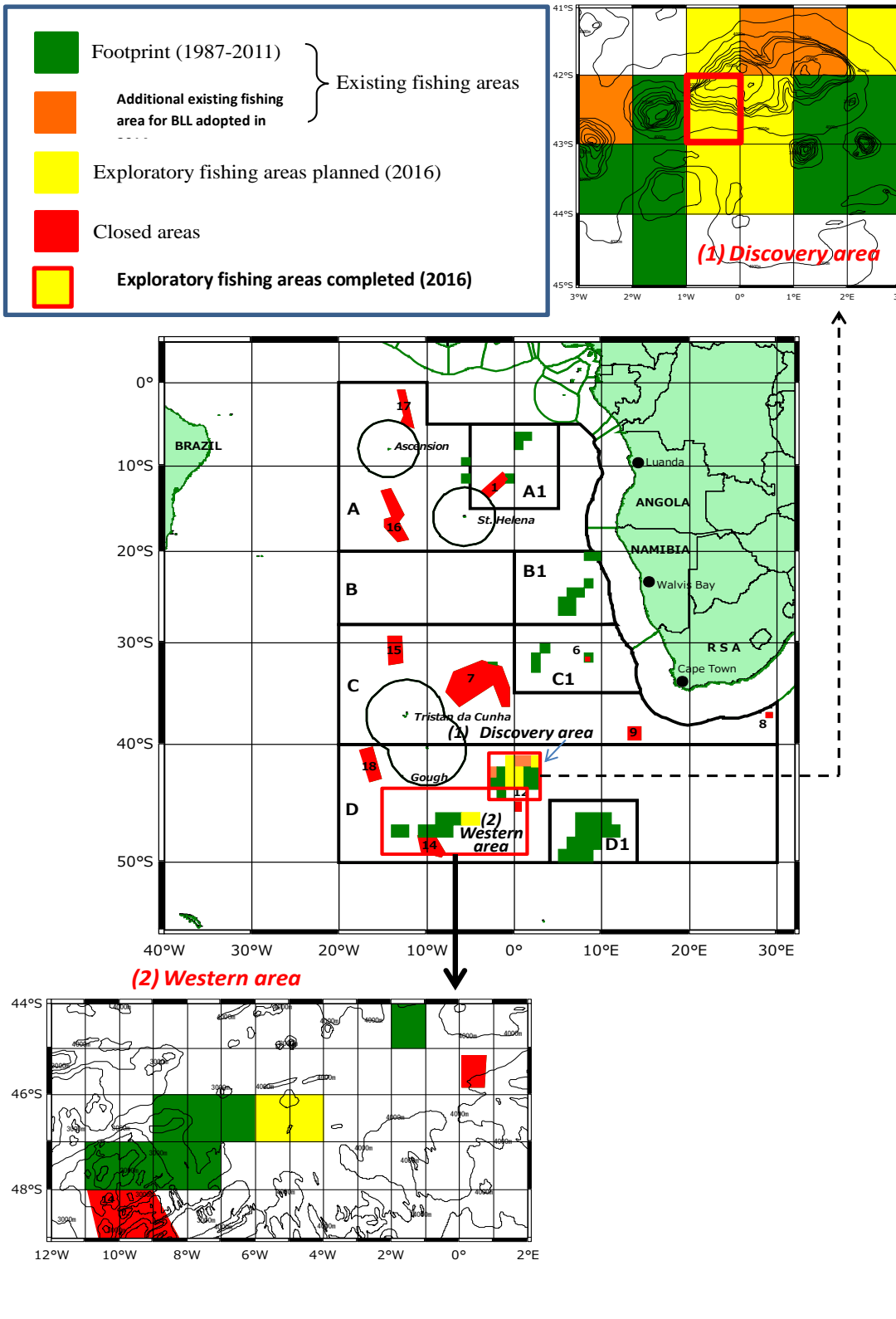
#### (2) 2016

The 2016 exploratory fishing areas were planned for six 1°x1° areas in the Discovery seamount and two in the western area, which are indicated by yellow markers in Box 2 (page 5). Among six blocks, one was completed by the exploratory fishing in 4 days (March 2-5, 2016), which is indicated by yellow marker with the red frame.

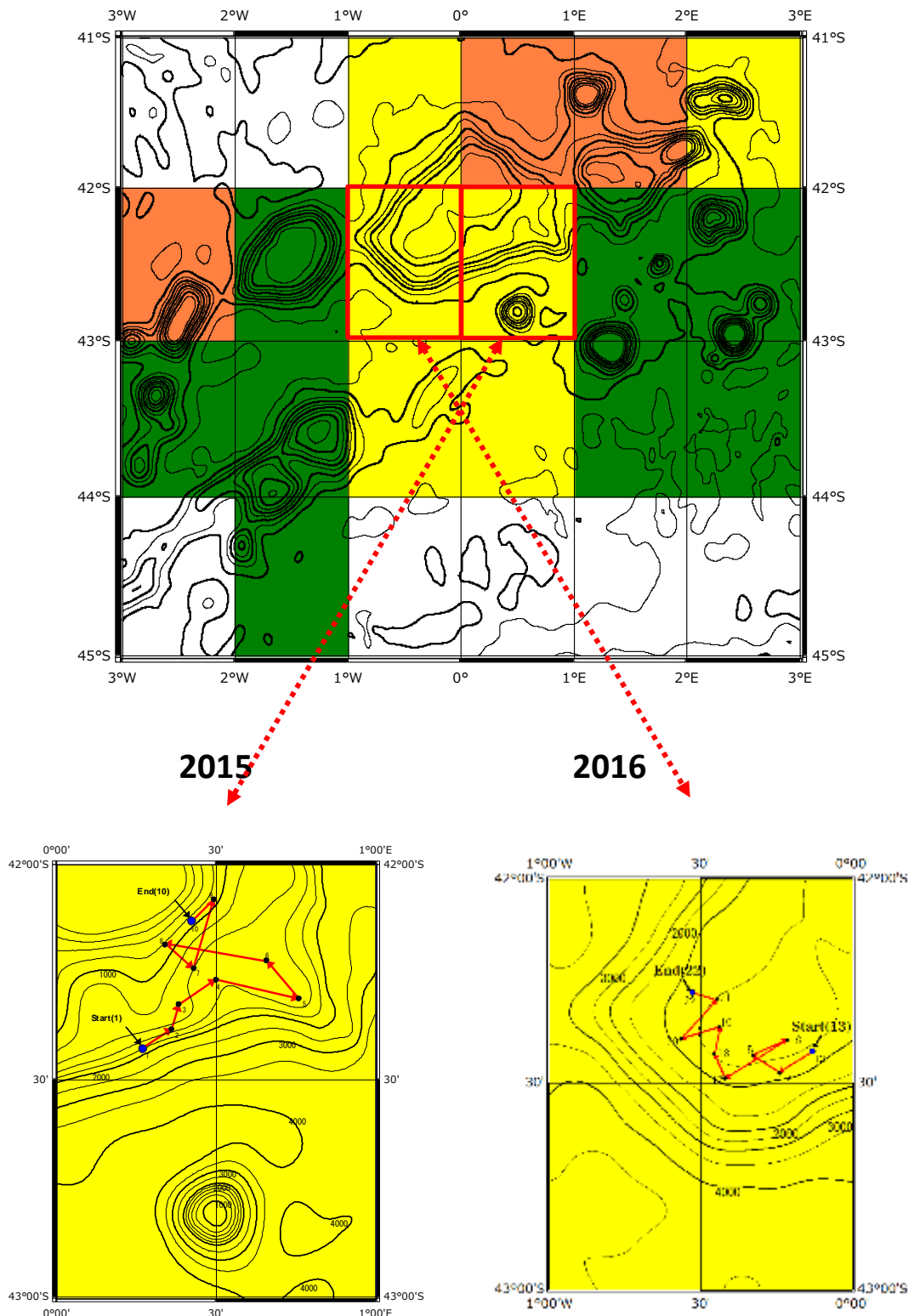
**Box 1 Exploratory fishing planned and completed in**



**Box 2 Exploratory fishing planned and completed in**



**4.3 Track lines (2015 and 2016) (Map 1)**



**Map 1 Track lines of RV Shinsei Maru No 3 in the exploratory fishing area (2015-16)**

### 4.4 Gear descriptions (Panel 1 :2015 and Panel 2: 2016)

#### Panel 1 (2015)

**L2(i): Longline description**

Longline Type: Trotline (vertical droppers/trots attached to mainline)

Period in which the gear was used (dd/mm/yy) Start: 2015/4/25 End: 2015/6/30

Target Species: Dissostichus eleginoides: TOP

Main Line:	Material	Polyethylene	Diameter (mm)	18	Integrated Wt (g/m)	N/A
Branch Lines:	Material	Polyethylene	Length (m)	22	Spacing (m)	45
Hooks:	Type	Apotuda	Total length (mm)	70		
	Shank (mm)	40	Gape (mm)	20	Throat (mm)	30
			Front length (mm)	35		

Usual setting position: Line off bottom (m): Variable Hooks off bottom (m): Variable

Method of Baiting: Manual

Automatic baiting equipment: Make: N/A Model: N/A

Hook sinkers: Size (g): N/A Position from hook (mm): N/A

Offal dumping position: Port side Longline setting position: Stern

Offal dumping during hauling: Always Propeller rotation direction (clockwise/anti-clockwise): Clockwise

Number	Average weight (kg)	SD (+-kg)
30	10.1	0.799

Weigh at least 30 line weights at random. Show working below if necessary

Place the weight and distance between the line weights in the boxes below for the longline system used

**Single (Auto) Line**

Distance between line weights (m): [ ] Weight (kg): [ ]

**Double (Spanish) Line**

Distance between line weights (m): [ ] Main line Weight (kg): [ ] Fishing (hook) line Weight (kg): [ ]

**Trotline (vertical droppers/trots attached to a mainline)**

Distance between line weights (m): 45 m Trotline Number of hooks per trotline: 20 / 25 Weight (kg): 10

Panel 2 2016

**L2(i): Longline description**

Longline Type: Trotline (vertical droppers/trots attached to mainline)

Period in which the gear was used (dd/mm/yy) Start: 2016/2/25 End: 2016/3/6

Target Species: *Dissostichus eleginoides*: TOP TOP

Main Line:	Material	Polypropylene	Diameter (mm)	16	Integrated Wt (g/m)	N/A
Branch Lines:	Material	Polypropylene	Length (m)	8	Spacing (m)	45
Hooks:	Type	APO 10/0	Make	Poutada	Total length (mm)	70
	Shank (mm)	40	Gape (mm)	25	Throat (mm)	30
Usual setting position:	Line off bottom (m)	0.3	Hooks off bottom (m)	0		

Method of Baiting: Manual

Automatic baiting equipment: Make: N/A Model: N/A

Hook sinkers: Size (g): N/A Position from hook (mm): N/A

Offal dumping position: Port side Longline setting position: Stern

Offal dumping during hauling: Always Propeller rotation direction (clockwise/anti-clockwise): Clockwise

Weigh at least 30 line weights at random.

Number	Average weight (kg)	SD (+-kg)
30	10.172	0.607

Place the weight and distance between the line weights in the boxes below for the longline system used

**Single (Auto) Line**

Distance between line weights (m): [ ]

Weight (kg): [ ]

**Double (Spanish) Line**

Distance between line weights (m): [ ]

Weight (kg): [ ]

**Trotline (vertical droppers/trots attached to a mainline)**

Distance between line weights (m): 45m

Number of hooks per trotline: 20

Weight (kg): 10.2

#### 4.5 Fishing efforts and gear lost

Table 2 shows the summary of fishing effort and Table 4 and 5 show catch (retain, discards, release information) during the exploratory fishing operations in 2015 and 2016 respectively. Maps 2-10 depicts distributions of catch (13 species).

Table 2 Fishing effort information in the exploratory fishing operations (2015-2016)

Category	2015	2016
Fishing periods	4/25-28 (trip 2)	3/2-5 (trip 1)
Fishing days	4 days	4 days
Number of total sets	10 operations (set number 1-10)	10 operations (set number 13-22)
Total number of hooks used	40,200	40,200
Number of hooks lost	none	See Table 3

Table 3 Information of gear lost (2016)

Set number	14	15	16	17	18	19	20	21	22
Stones	0	1	0	9	0	0	0	0	0
Hooks	0	2	0	10	30	0	0	0	0
Dropline	0	1	0	0	0	0	0	0	0
Snaps	0	1	0	0	0	0	0	0	0
Section	0	1	0	0	0	0	0	0	0
Anchor	0	0	0	0	1	0	0	0	0

o

#### 4.6 Catch and bycatch

Catch and by catch information are summarized in Tables 4 -5 and Maps 2-14, i.e.,

Table 4 Catch and bycatch information (retain, discards and release) (2015)

Table 5 Catch and bycatch information (retain, discards and release) (2016)

Maps 2-14 Distribution of catch and bycatch by (13) species (2015-2016)

**Table 4 Catch and bycatch information (retain, discards and release) (2015)**

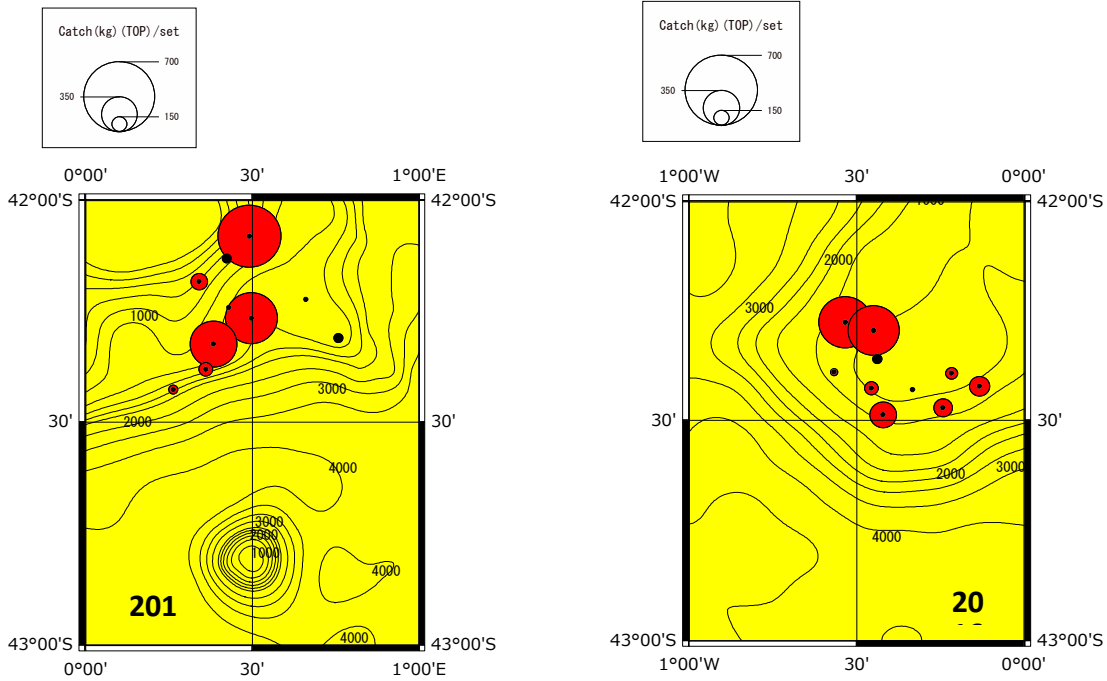
Species Name (number)		total retained catch weight (kg)	total discarded catch weight (kg)	observed number retained	observed number discarded	observed number discarded dead	observed number released alive average health	observed number released alive
TOP	Patagonian toothfish	1981.86	103	67	6			
GRV	Rattail		720.2			128		
ANT	Deep sea cod		383.7			127		
GSK	Greenland Shark							1
HIB	Deepwater arrow tooth eel		17.7			6		
SRX	Skates and rays		15.5			1	3	
HYD	Chimaeras ghost sharks		199.7			7		
CGE	Deep sea red crab							1
MRL	Mory cods		1					
LEV	Lepidion codlings nei		5.3			1		
BSH	Blur Shark		88.6			2		



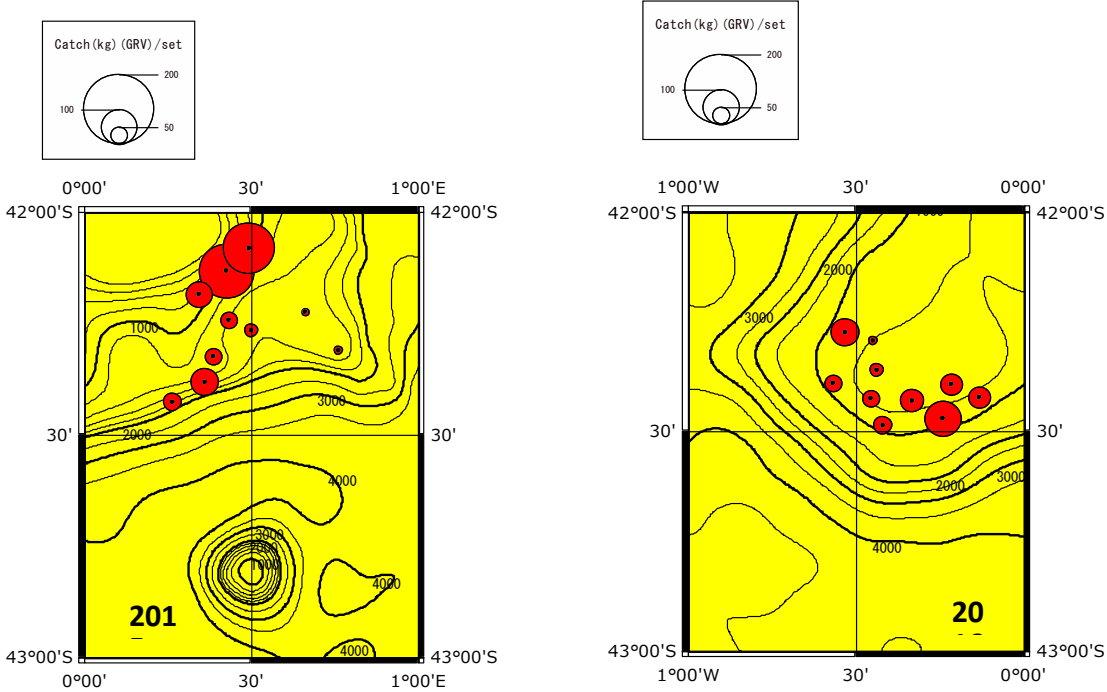


**Map 2-14 Distribution of catch and bycatch by species (2015: left and 2016: right)**

( · ) black dot → 0 (zero) catch

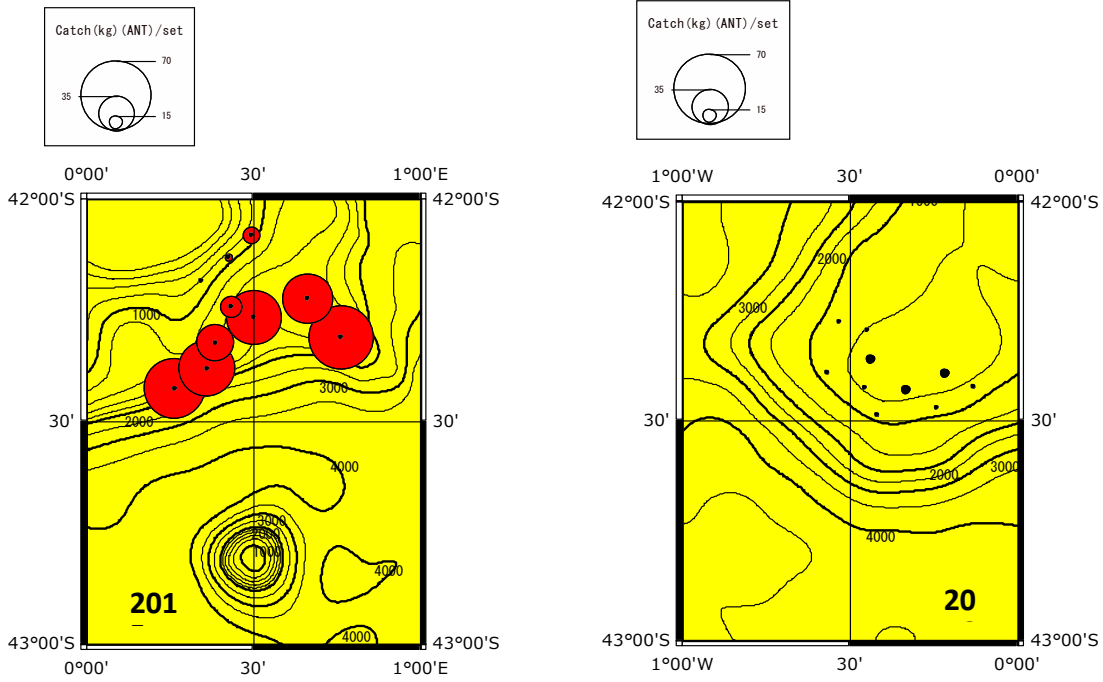


**Map 2 Catch (Kg) (TOP) Patagonian toothfish**

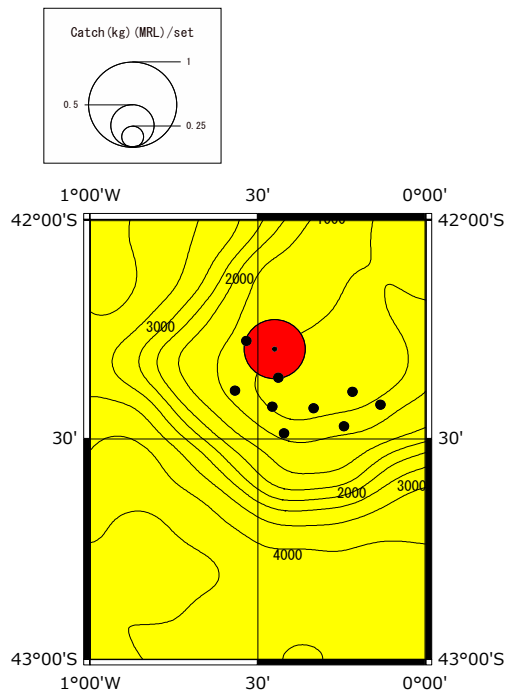


**Map 3 Bycatch (Kg) (GRV) Rattail**

( · ) black dot → 0 (zero) catch

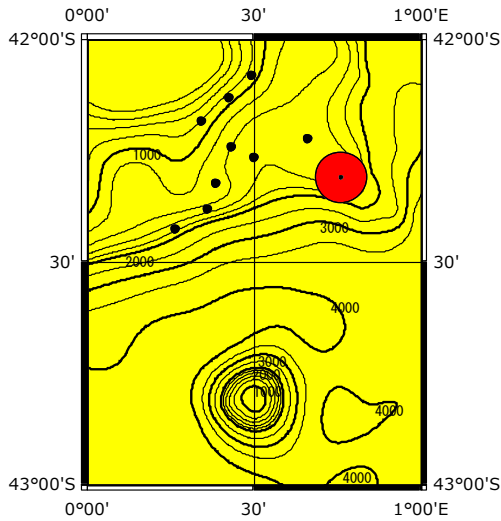
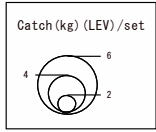


**Map 4 Bycatch (Kg) (ANT) Blue antimora**

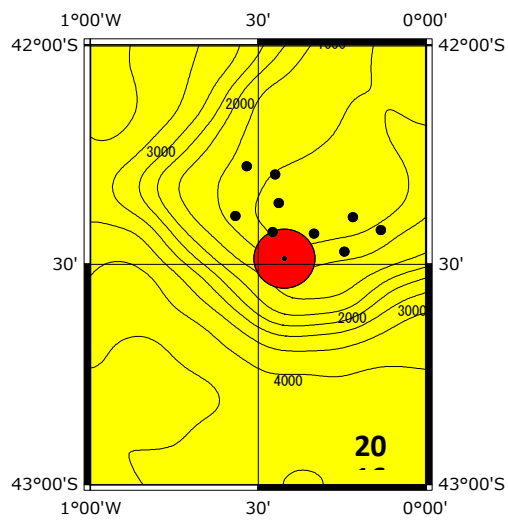
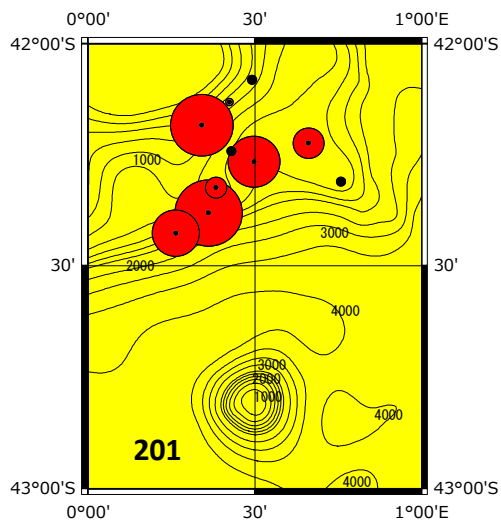
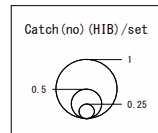
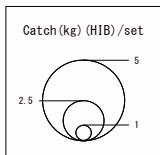


**Map 5 Bycatch (Kg) (MRL) Moray cods**

( • ) black dot → 0 (zero) catch

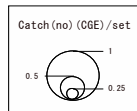
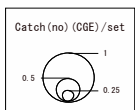


Map 6 Bycatch (no of fish) (LEV) Lepidion codling



Map 7 Bycatch (Kg in 2015 and number in 2016) (HIB) Deepwater arrow tooth eel

( • ) black dot → 0 (zero)

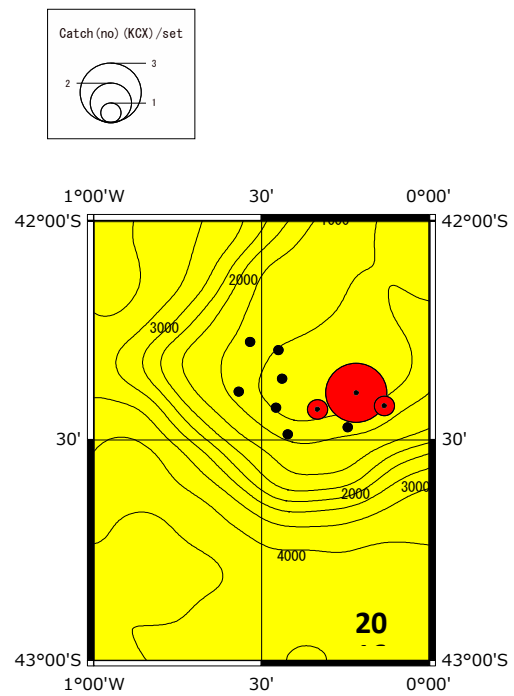


0°00' 30' 1°00'E 1°00'W 30' 0°00'

201

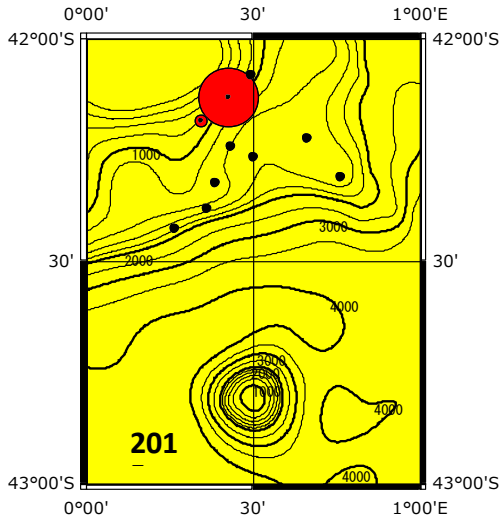
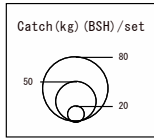
20

Map 8 Bycatch (number) (CGE) Deep sea red crab

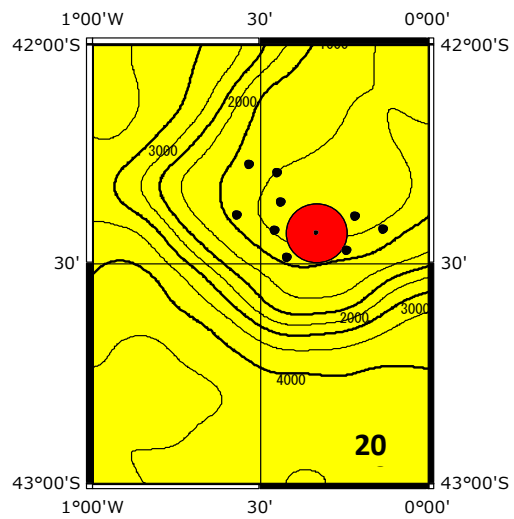
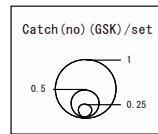
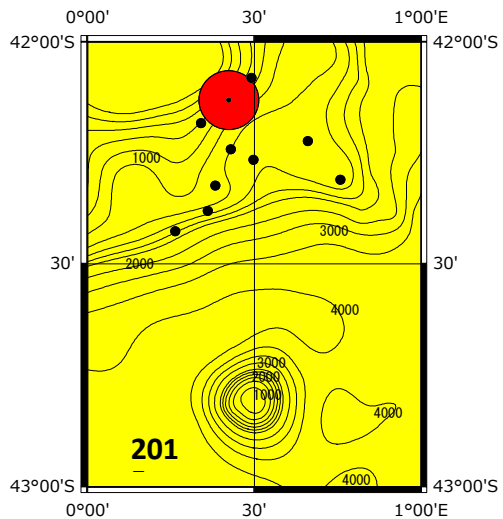
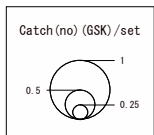


Map 9 Bycatch (number) (KCX) Crab species

( · ) black dot → 0 (zero) catch

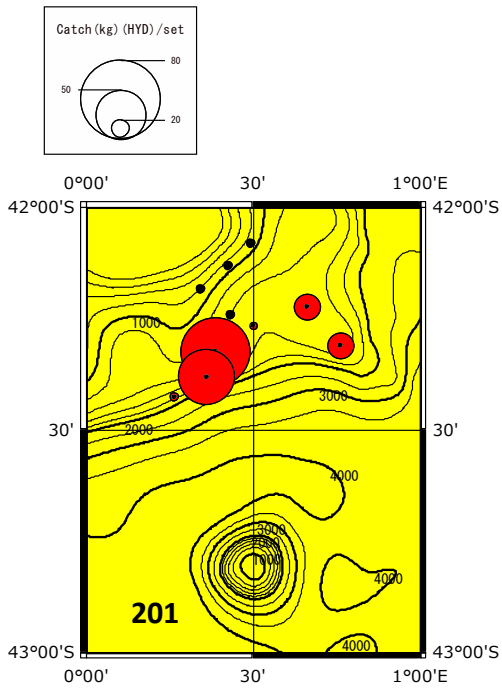


Map 10 Bycatch (Kg) (BSH) blue shark

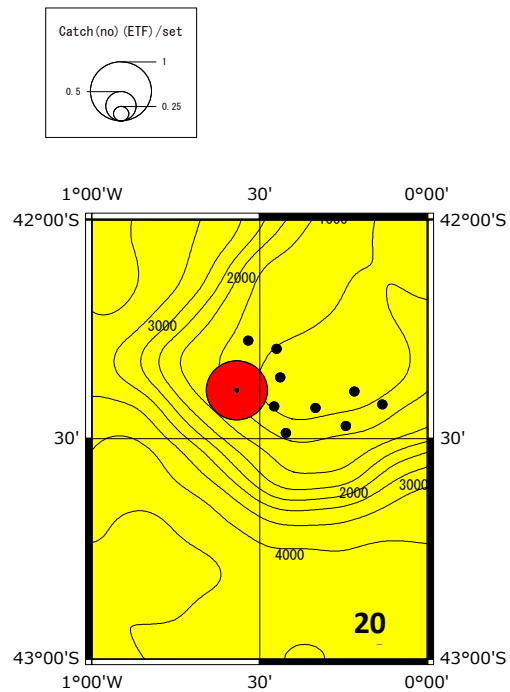


Map 11 Bycatch (number) (GSK) Greenland Shark(?) (miss – identified?)

( • ) black dot → 0 (zero) catch

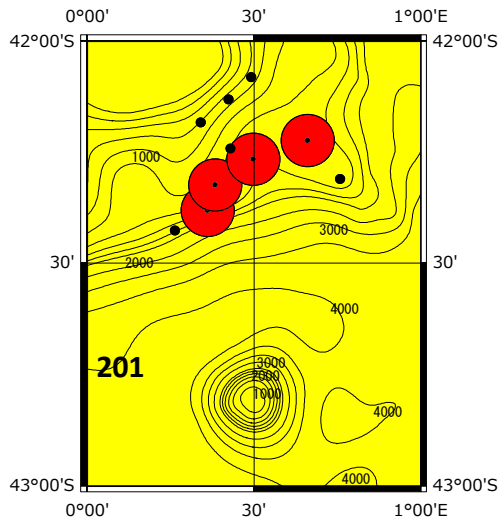
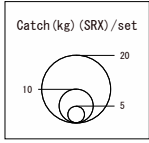


Map 12 bycatch (Kg) (HYD) Chimaeras ghost sharks



Map 13 Bycatch (number) (ETF) Blackbelly lanternshark

( · ) black dot → 0 (zero) catch

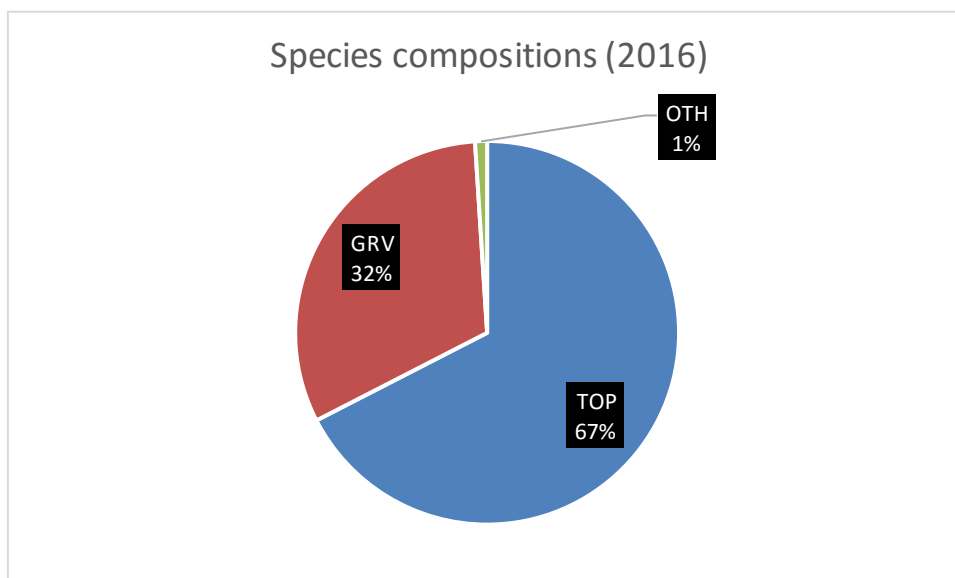
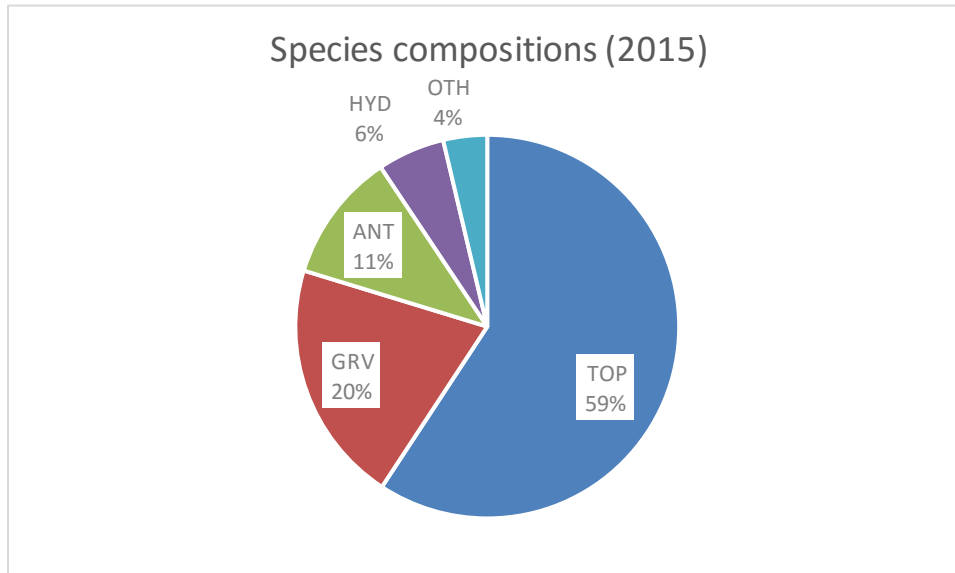


Map 14 Bycatch (Kg) (SRX) Skates and rays



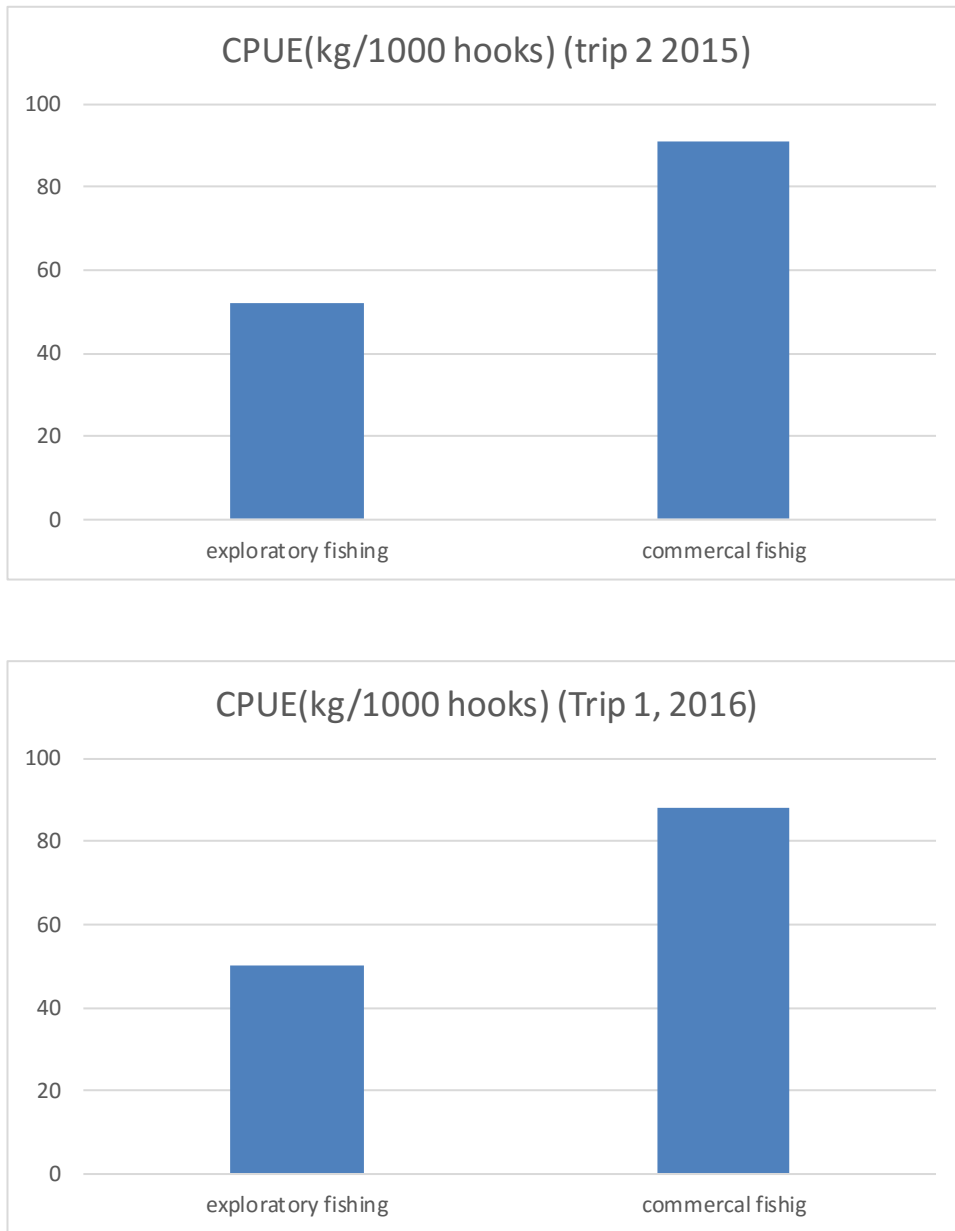
**4.7 Species compositions of catch + bycatch in the exploratory fishing (2015-2016) (Box 3)**

**Box 3 Species compositions of catch + bycatch in the exploratory fishing (2015-2016)**



TOP Patagonian toothfish  
 GRV Rattail  
 ANT Blue antimora  
 HYD Chimaeras ghost sharks (less than 500m)

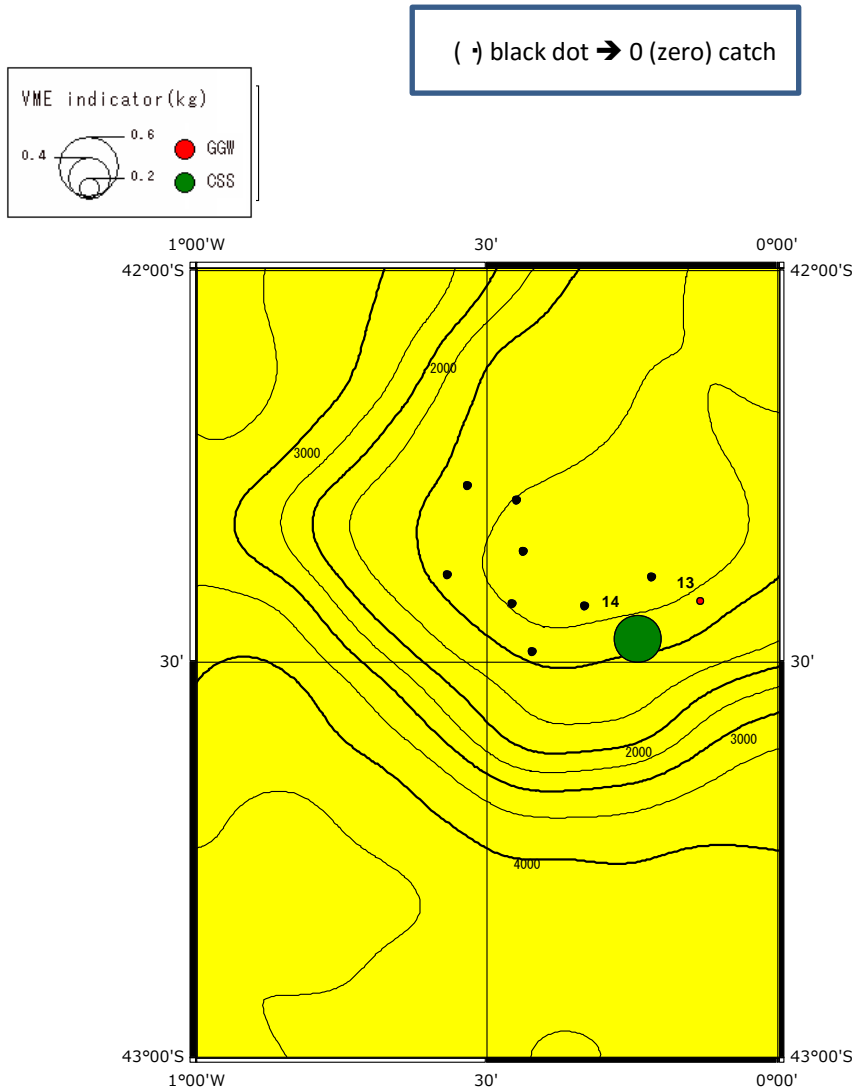
**4.8 Comparison of CPUE between exploratory & commercial fishing within the same trip (Fig. 1)**



**Fig. 1 Comparison of CPUE between exploratory & commercial fishing within the same trip**

**4.9 VME**

In 2015, no VME species were incidentally captured in the exploratory fishing. In 2016, two VME species (GGW and CSS) were incidentally caught in 2 separate locations (Map 15). Their weights were 0.01 kg (GGW) and 0.58 kg (CSS) less than the threshold levels (10 VME-indicator units, i.e., 10kg/1000 hooks).



year	Set number	Date	Code	Scientific name	English name	Weight (kg)
2016	13	March 3	GGW	Gorgoniidae	Gorgonian	0.01
	14	March 3	CSS	Scleractinia	Stony coral	0.58

Map 15 Bycatch weights of VME species by the exploratory fishing (2016)

### 4.10 Sea birds

#### (1) Mitigation (stream line and bottle tests)

FV Shinsei No 3 deployed the stream lines (Fig. 2 in 2015 and Fig. 3 in 2016) requested by SEAFO Sea bird mitigation measure (CM25/12) during the exploratory fishing and also during the commercial fishing operations. Bottle tests were conducted and passed before starting operations in 2015 and 2016.

Fig. 2 Stream lines deployed by FV Shinsei No 3 during the exploratory fishing (2015)

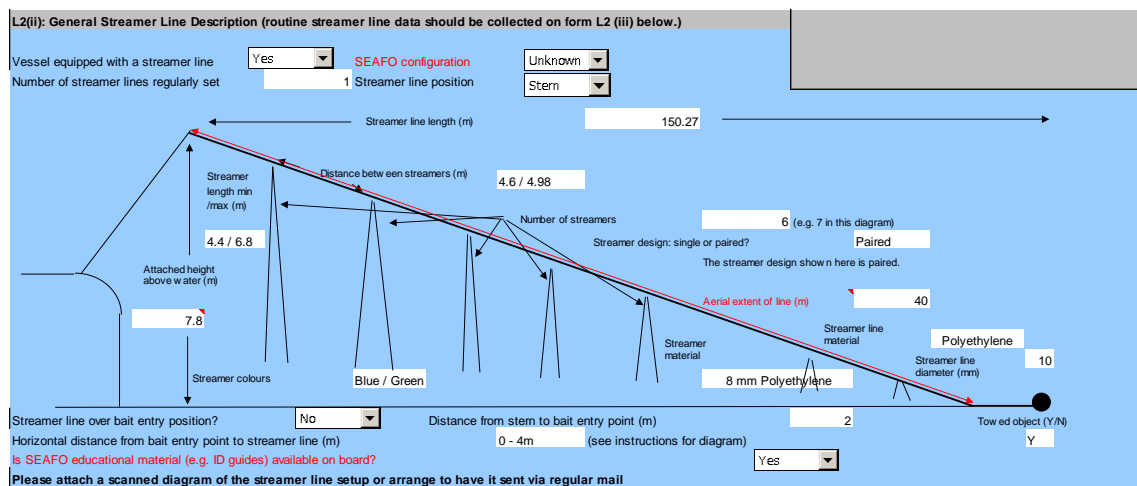
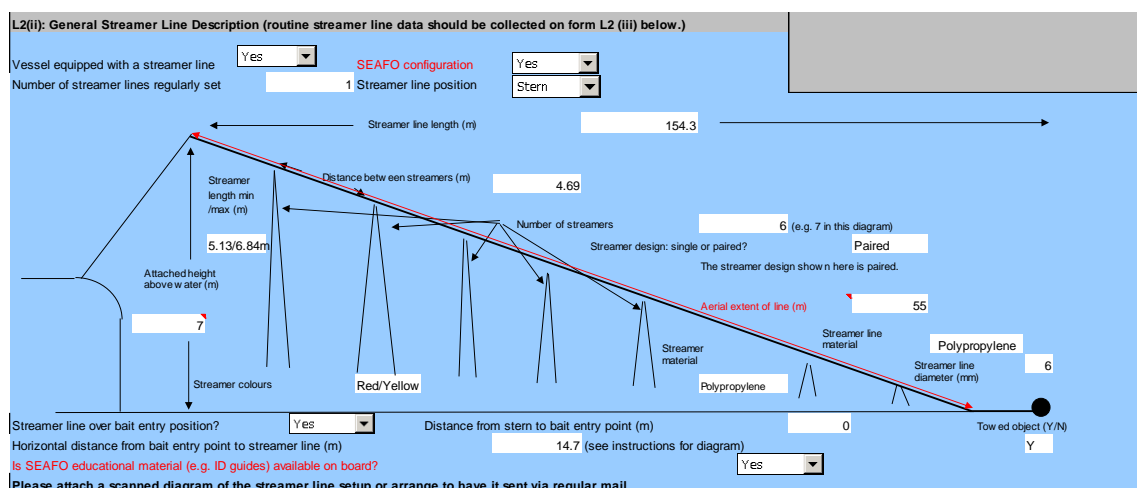


Fig. 3 Stream lines deployed by FV Shinsei No 3 during the exploratory fishing (2016)



**(2) Observations**

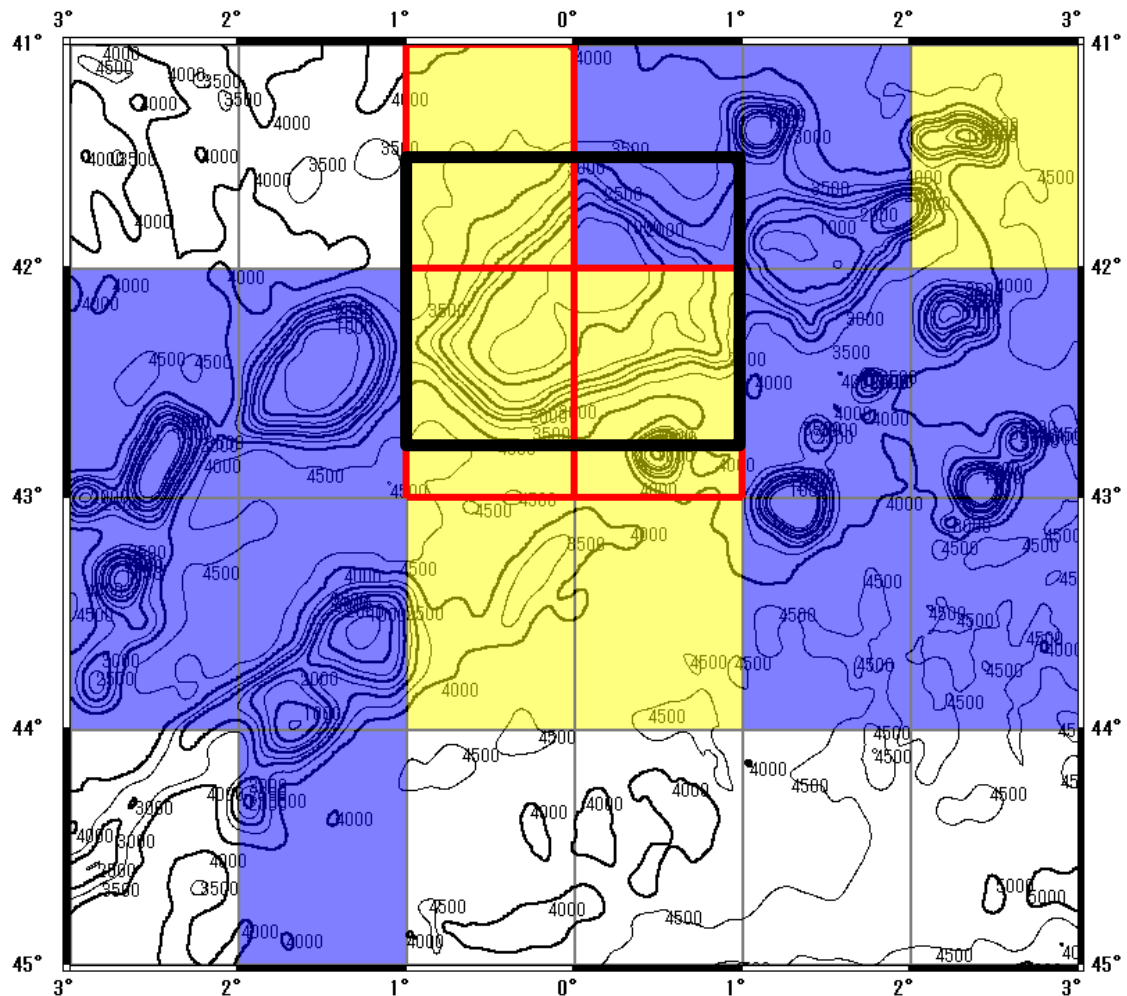
One observer on board investigated sea birds around the FV Shinsei Maru No 3 during the exploratory fishings (2015-2016) (Table 7).

**Table 7 Results of seabird observation during day Settings in exploratory fishings**

year	date	Set number	FAO Species Code	Scientific name	English name	Distance astern (m)	number	Foraging method
2015	April-16	7	DIX	Diomedea exulans	Wandering albatross	100		Not Feeding
		7	PCI	Procellaria cinerea	Grey petrel	50		Diving
		7	PRO	Procellaria aequinoctialis	White-chinned petrel	50		Diving
		7	DAC	Daption capense	Cape petrel	30		Setting on surface
	April-16	9	DIX	Diomedea exulans	Wandering albatross	100		Not Feeding
		9	PCI	Procellaria cinerea	Grey petrel	50		Diving
		9	PRO	Procellaria aequinoctialis	White-chinned petrel	50		Diving
		9	DAC	Daption capense	Cape petrel	40		Setting on surface
2016	March-16	13	PUG	Puffinus gravis	Great shearwater	40	10	
		13	PRO	Procellaria aequinoctialis	White-chinned petrel	60	1	
		13	DIM	Thalassarche melanophrys	Black-browed albatross	60	3	
		13	OCO	Oceanites oceanicus	Wilson's storm petrel	60	4	
		13	PCI	Procellaria cinerea	Grey petrel	60	2	
		14	DIX	Diomedea exulans	Wandering albatross	50	1	
		14	PUG	Puffinus gravis	Great shearwater	50	7	
		14	DIM	Thalassarche melanophrys	Black-browed albatross	50	1	
		14	OCO	Oceanites oceanicus	Wilson's storm petrel	50	5	
		15	DIX	Diomedea exulans	Wandering albatross	50	1	
		15	PUG	Puffinus gravis	Great shearwater	50	10	
		15	OCO	Oceanites oceanicus	Wilson's storm petrel	50	3	
		15	DIM	Thalassarche melanophrys	Black-browed albatross	50	1	
		15	PCI	Procellaria cinerea	Grey petrel	50	1	
	16	NA (Night)						
	March-16	17	NA (Night)					
	March-16	18	NA (Night)					
		19	NA (Night)					
		20	PUG	Puffinus gravis	Great shearwater	45	25	
		20	DIM	Thalassarche melanophrys	Black-browed albatross	45	1	
		20	OCO	Oceanites oceanicus	Wilson's storm petrel	50	1	
		20	PFG	Puffinus griseus	Sooty shearwater	50	2	
		20	PRO	Procellaria aequinoctialis	White-chinned petrel	50	1	
		20	DIX	Diomedea exulans	Wandering albatross	50	1	
	21	NA (Night)						
	March-16	22	DIX	Diomedea exulans	Wandering albatross	60	2	
		22	PUG	Puffinus gravis	Great shearwater	60	60	
22		PRO	Procellaria aequinoctialis	White-chinned petrel	60	1		
22		PFG	Puffinus griseus	Sooty shearwater	60	2		
22		PHU	Phoebetria fusca	Sooty albatross	80	1		
22		PHE	Phoebetria palpebrata	Light-mantled sooty albatross	100	1		

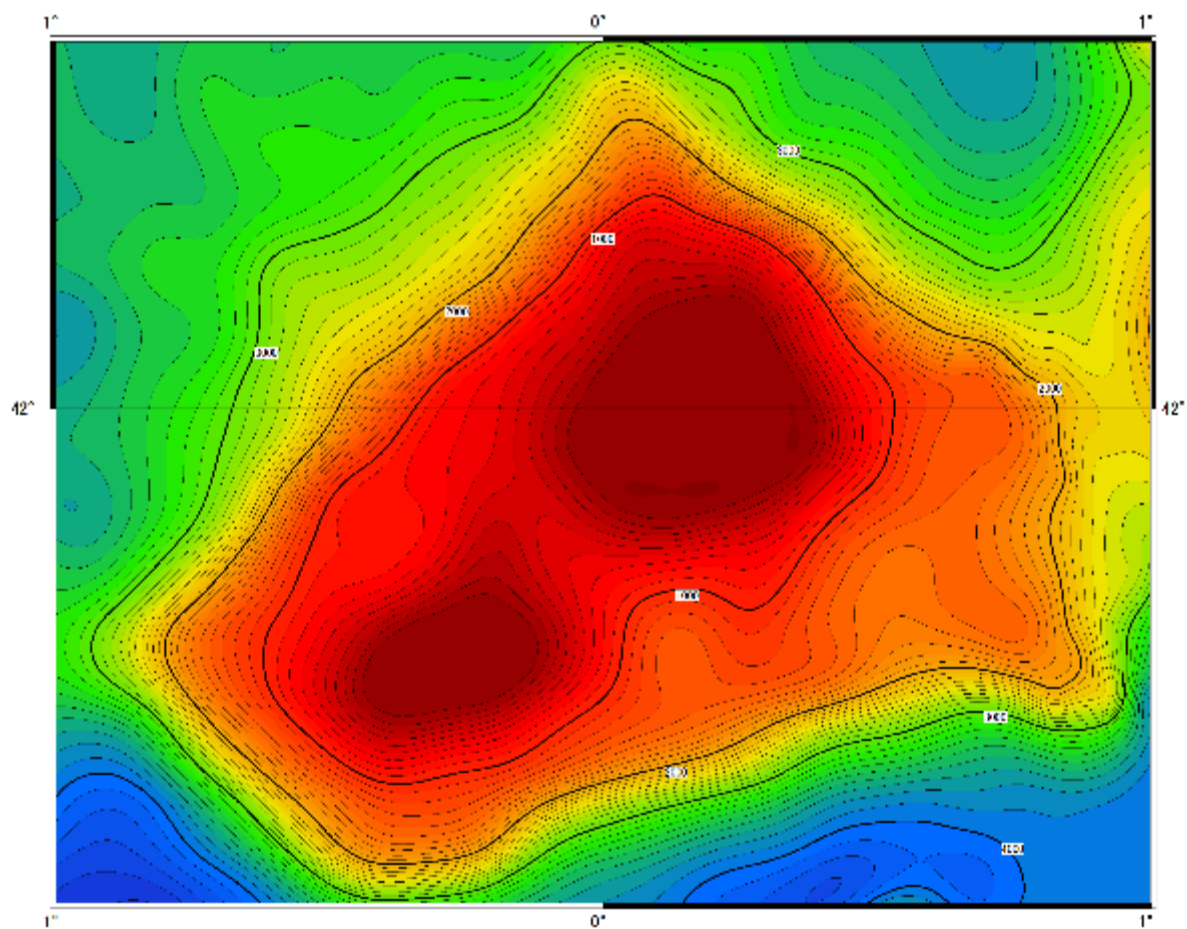
#### 4.11 Sea bed mappings of the main exploratory fishing area

Hybrid bathymetry maps in the good fishing area of the exploratory fishing (Black frame area in Map 16) were created by combining echo sounder data of FV Shinsei Maru No 3 and ETOPO1 depth digital data built from numerous global and regional data sets (Maps 17-19).

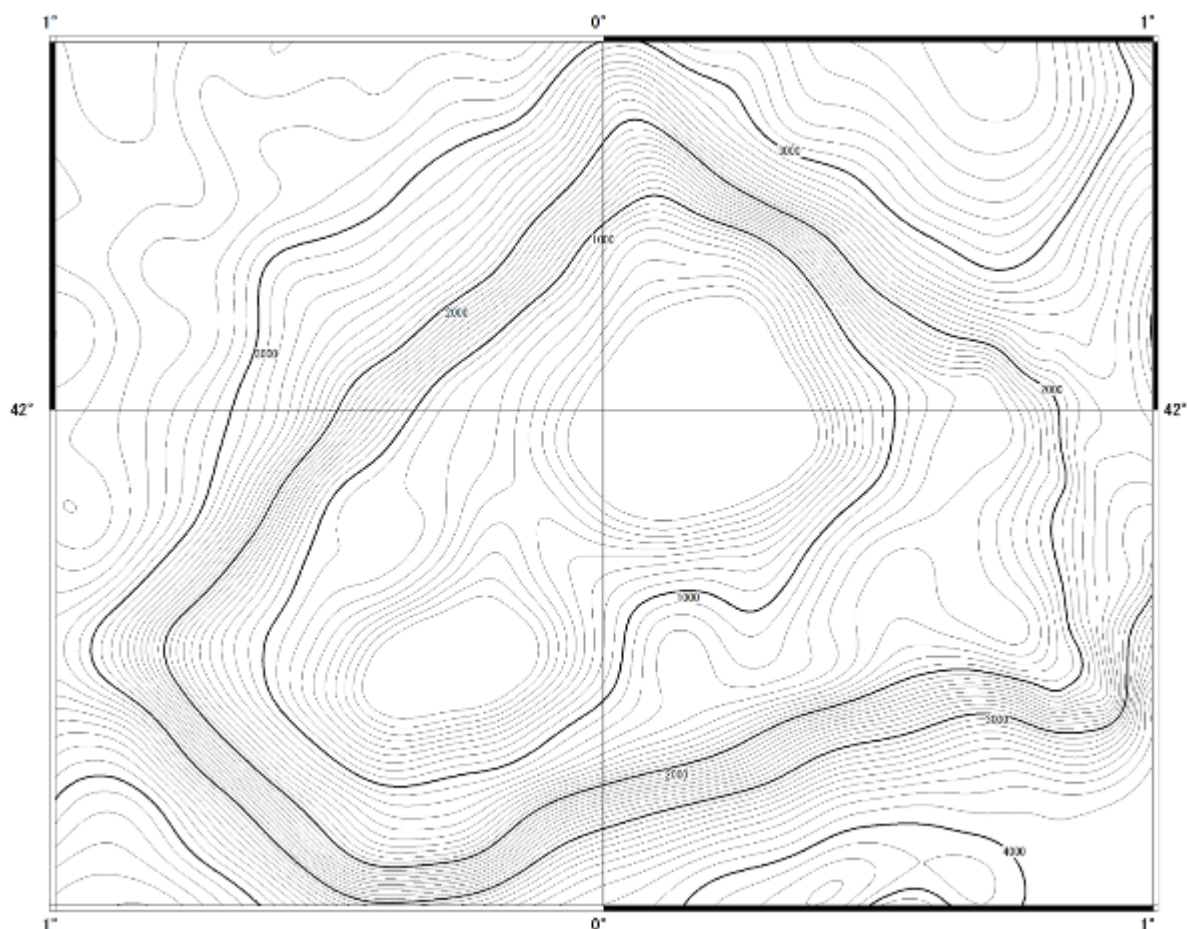


Map 16 Sea bed mapping area (Black frame)

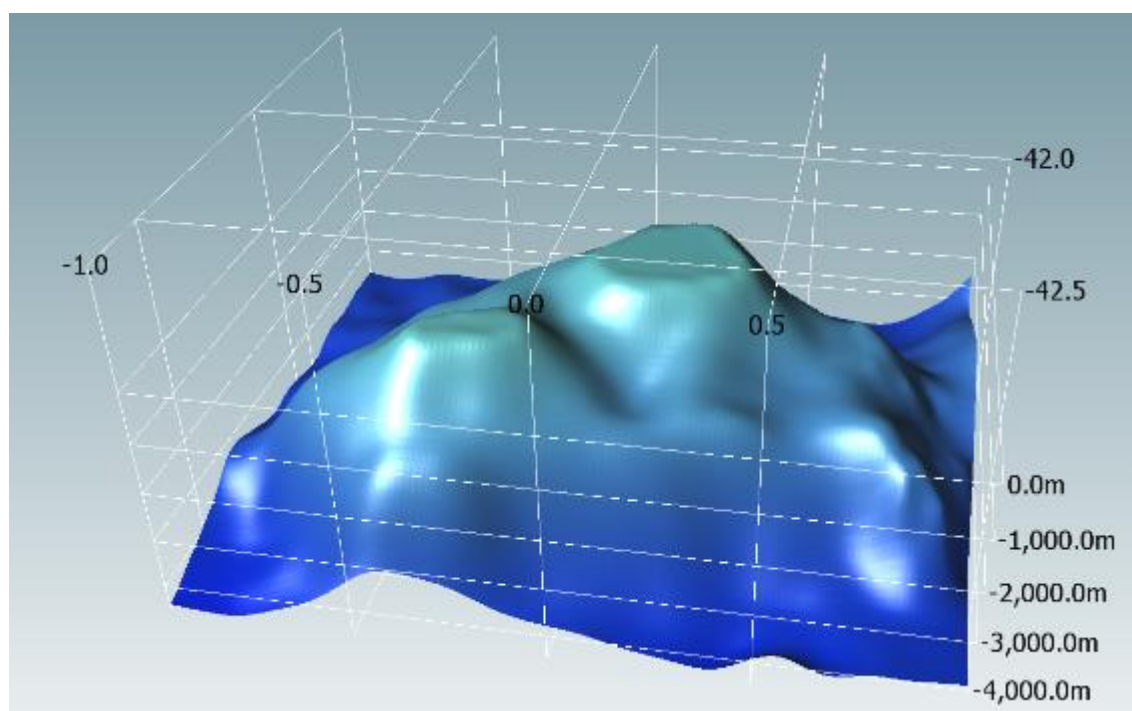
Good fishing ground in the exploratory fishing area



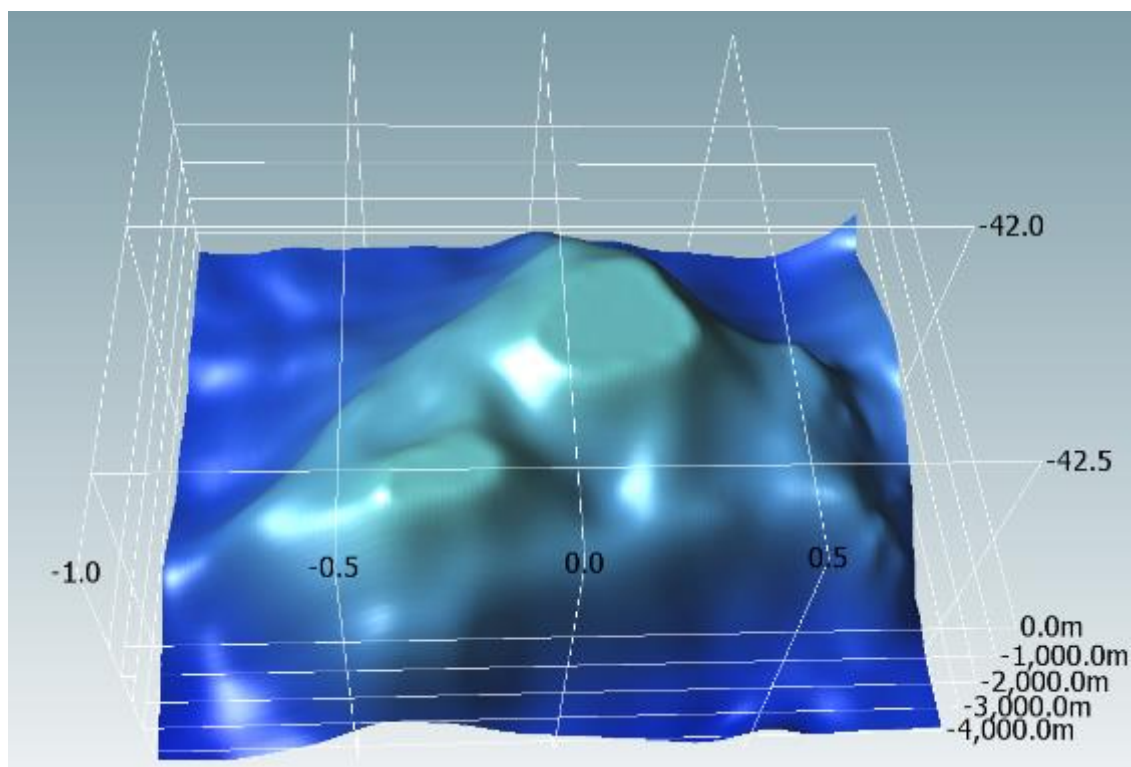
Map 17 Hybrid bathymetry map based on echo sounder data of FV Shinsei Maru No 3 and ETOPO1 digital depth data (Filled mode).



Map 18 Hybrid bathymetry map based on echo sounder data of FV Shinsei Maru No 3 and ETOPO1 digital depth data (Filled mode).







Map 19 Hybrid 3D bathymetry map based on echo sounder data of FV Shinsei Maru No 3 and ETOPO1 digital depth data (Filled mode).

**Appendix A: List of biological data collected (Table 8 for 2015) (Table 9 for 2016)**

**Table 8 (1) Biological data collected (2015)**

Set number	Date	Observer ID	Basket/Magazine No.	Serial No.	Species Code	Scale/Otolith/Both/Thoms	Total Length (cm)	Snout-Anus Length (cm)	Wingspan (cm)	Pelvic length (cm)	Weight (kg)	Sex	Maturity Stage	Gonad Weight (g)	Comments	Trunk Weight
1	26-Apr-15	1		1	TOP	O	117				17	M	2	20		10
1	26-Apr-15	1		2	TOP	O	90				9.4	F	1	40		5.4
1	26-Apr-15	1		3	TOP	O	82				6.3	F	1	20		3.6
1	26-Apr-15	1		4	TOP	O	133				33	F	2	120		19.7
1	26-Apr-15	1		5	TOP	O	151				44.5	F	2	140		27.1
1	26-Apr-15	1		1	MCC	O	58	20			0.8	F	2			
1	26-Apr-15	1		2	MCC	O	62	22			1.1	F	1			
1	26-Apr-15	1		3	MCC	O	54	22			0.9	F	1			
1	26-Apr-15	1		4	MCC	O	84	30			2.8	F	3			
1	26-Apr-15	1		5	MCC	O	71	25			1.8	F	4			
1	26-Apr-15	1		6	MCC	O	41	14			0.3	F	1			
1	26-Apr-15	1		7	MCC	O	66	24			1.4	M	3			
1	26-Apr-15	1		8	MCC	O	71	26			2.1	F	4			
1	26-Apr-15	1		9	MCC	O	73	26			2	F	3			
1	26-Apr-15	1		10	MCC	O	44	17			0.5	F	1			
2	26-Apr-15	1		1	TOP	O	138				31.2	F	2	100		16.8
2	26-Apr-15	1		2	TOP	O	111				16	F	2	150		9.1
2	26-Apr-15	1		3	TOP	O	100				11.1	F	2	60		6.6
2	26-Apr-15	1		4	TOP	O	132				30.2	F	2	100		17.2
2	26-Apr-15	1		5	TOP	O	153				41.7	F	2	180		24.5
2	26-Apr-15	1		6	TOP	O	129				25.6	F	2	100		15.2
2	26-Apr-15	1		7	TOP	O	92				8.6	F	1	40		4.7
2	26-Apr-15	1		1	MCC	O	91	35			4.1	F	4			
2	26-Apr-15	1		2	MCC	O	57	20			1	F	1			
2	26-Apr-15	1		3	MCC	O	50	18			0.7	F	1			
2	26-Apr-15	1		4	MCC	O	89	32			3.7	F	3			
2	26-Apr-15	1		5	MCC	O	82	32			2.9	F	4			
2	26-Apr-15	1		6	MCC	O	70	25			1.6	F	2			
2	26-Apr-15	1		7	MCC	O	45	15			0.4	M	1			
2	26-Apr-15	1		8	MCC	O	52	19			0.7	M	1			
2	26-Apr-15	1		9	MCC	O	53	19			0.7	F	1			
2	26-Apr-15	1		10	MCC	O	97	35			4.7	F	4			
2	26-Apr-15	1		1	SRX		129		87	90	15.5	M	3			
3	27-Apr-15	1		1	TOP	O	133				28.5	F	2	80		17
3	27-Apr-15	1		2	TOP	O	148				43.9	F	2	200		27.4
3	27-Apr-15	1		3	TOP	O	127				25	F	2	60		15
3	27-Apr-15	1		4	TOP	O	142				44.5	F	2	220		27
3	27-Apr-15	1		5	TOP	O	122				25.1	F	2	100		14.6
3	27-Apr-15	1		6	TOP	O	93				8.9	F	1	40		5.2
3	27-Apr-15	1		7	TOP	O	152				50.2	F	2	300		29
3	27-Apr-15	1		8	TOP	O	110				14.2	F	2	40		8.3
3	27-Apr-15	1		9	TOP	O	146				39.1	F	2	220		21.2
3	27-Apr-15	1		10	TOP	O	149				43.9	F	2	200		25.5
3	27-Apr-15	1		11	TOP	O	99				10.3	F	2	20		6
3	27-Apr-15	1		12	TOP	O	97				9.2	F	1	40		5.3
3	27-Apr-15	1		13	TOP	O	157				47.3	F	2	140		28.8
3	27-Apr-15	1		14	TOP	O	130				27.2	F	2	80		16
3	27-Apr-15	1		1	MCC	O	71	32			2.8	F	2			
3	27-Apr-15	1		2	MCC	O	45	19			0.8	F	2			
3	27-Apr-15	1		3	MCC	O	71	31			2.1	F	2			
3	27-Apr-15	1		4	MCC	O	61	24			1.3	F	2			
3	27-Apr-15	1		5	MCC	O	72	32			3.1	F	3			
3	27-Apr-15	1		6	MCC	O	51	21			0.9	M	2			
3	27-Apr-15	1		7	MCC	O	68	25			1.6	F	2			
3	27-Apr-15	1		8	MCC	O	45	17			0.6	F	1			
3	27-Apr-15	1		9	MCC	O	57	22			1	F	1			
3	27-Apr-15	1		10	MCC	O	52	18			0.7	F	1			
4	27-Apr-15	1		1	TOP	O	130				30.3	M	2	40		18.6
4	27-Apr-15	1		2	TOP	O	123				21.6	F	2	60		12.7
4	27-Apr-15	1		3	TOP	O	159				62.9	F	2	300		41
4	27-Apr-15	1		4	TOP	O	165				60.2	F	2	200		37
4	27-Apr-15	1		5	TOP	O	154				51.8	F	2	200		30.9
4	27-Apr-15	1		6	TOP	O	118				22	F	2	200		12.7
4	27-Apr-15	1		7	TOP	O	136				31	F	2	200		19
4	27-Apr-15	1		8	TOP	O	146				44	F	2	220		26
4	27-Apr-15	1		9	TOP	O	143				37.1	F	2	160		22.7
4	27-Apr-15	1		10	TOP	O	92				8.5	M	1	20		4.9
4	27-Apr-15	1		11	TOP	O	117				19	M	2	40		11
4	27-Apr-15	1		12	TOP	O	161				58	F	2	220		36.3
4	27-Apr-15	1		13	TOP	O	127				25	F	2	60	Shark damage	
4	27-Apr-15	1		14	TOP	O	118				19.5	F	2	60		10.6
4	27-Apr-15	1		15	TOP	O	114								Bad shark damage	
4	27-Apr-15	1		1	MCC	O	51	18			0.7	M	1			
4	27-Apr-15	1		2	MCC	O	83	31			2.9	F	2			
4	27-Apr-15	1		3	MCC	O	56	20			0.9	F	1			
4	27-Apr-15	1		4	MCC	O	54	20			1	F	1			
4	27-Apr-15	1		5	MCC	O	38	14			0.3	F	1			
4	27-Apr-15	1		6	MCC	O	57	21			1	F	1			
4	27-Apr-15	1		7	MCC	O	55	19			0.9	F	1			
4	27-Apr-15	1		8	MCC	O	52	20			0.9	M	1			
4	27-Apr-15	1		9	MCC	O	63	24			1.6	F	2			
4	27-Apr-15	1		10	MCC	O	49	18			0.8	F	1			
4	27-Apr-15	1		1	SRX		133		85	93	16.4	M	3			
5	27-Apr-15	1		1	MCC	O	85	35			4.3	F	4			
5	27-Apr-15	1		2	MCC	O	73	31			2.7	F	3			
5	27-Apr-15	1		3	MCC	O	59	23			1.3	F	2			
5	27-Apr-15	1		4	MCC	O	65	28			2.2	F	3			
5	27-Apr-15	1		5	MCC	O	61	25			1.3	F	2			
5	27-Apr-15	1		6	MCC	O	68	29			2.5	F	3			
5	27-Apr-15	1		7	MCC	O	59	22			1.1	F	2			
5	27-Apr-15	1		8	MCC	O	62	26			1.4	F	2			
5	27-Apr-15	1		9	MCC	O	69	29			2	F	3			
5	27-Apr-15	1		10	MCC	O	89	39			5	F	4			
5	27-Apr-15	1		1	LEV		89				5.3					

Table 8 (2) Biological data collected (2015)

Set number	Date	Observer ID	Basket/Magazine No.	Serial No.	Species Code	Scale/Otolith/Both/Thorns	Total Length (cm)	Snout-Anus Length	Wingspan (cm)	Pelvic length (cm)	Weight (kg)	Sex	Maturity Stage	Gonad Weight (g)	Comments	Trunk Weight
6	28-Apr-15	1		1	TOP	O	132				33.9	F	2	100		20.3
6	28-Apr-15	1		2	TOP	O	108				13.4	M	5	80		7.9
6	28-Apr-15	1		1	MCC	O	51	19			0.7	F	1			
6	28-Apr-15	1		2	MCC	O	46	16			0.5	M	1			
6	28-Apr-15	1		3	MCC	O	60	22			1.1	F	1			
6	28-Apr-15	1		4	MCC	O	48	20			1	F	1			
6	28-Apr-15	1		5	MCC	O	59	24			1.2	F	2			
6	28-Apr-15	1		6	MCC	O	58	24			1.5	F	2			
6	28-Apr-15	1		7	MCC	O	50	18			0.8	M	2			
6	28-Apr-15	1		8	MCC	O	53	19			1.2	U	1			
6	28-Apr-15	1		9	MCC	O	63	26			1.5	F	2			
6	28-Apr-15	1		10	MCC	O	77	33			3	F	3			
7	28-Apr-15	1		1	TOP	O	88				8.3	F	1	20		4.9
7	28-Apr-15	1		2	TOP	O	123				25	F	2	80		14.1
7	28-Apr-15	1		3	TOP	O	130				28	M	2	50		15.6
7	28-Apr-15	1		4	TOP	O	149				51	F	2	140		31.7
7	28-Apr-15	1		5	TOP	O	120				20.8	F	2	100		11.2
7	28-Apr-15	1		6	TOP	O	108				14	F	2	60		8.3
7	28-Apr-15	1		7	TOP	O	127				24.5	F	2	120		
7	28-Apr-15	1		1	MCC	O	57	19			1.1	M	2			
7	28-Apr-15	1		2	MCC	O	55	20			1.1	F	2			
7	28-Apr-15	1		3	MCC	O	50	18			0.8	M	1			
7	28-Apr-15	1		4	MCC	O	76	28			2.6	F	2			
7	28-Apr-15	1		5	MCC	O	94	32			4.4	F	3			
7	28-Apr-15	1		6	MCC	O	80	32			3.5	F	4			
7	28-Apr-15	1		7	MCC	O	85	32			3.1	F	3			
7	28-Apr-15	1		8	MCC	O	88	32			3.2	F	3			
7	28-Apr-15	1		9	MCC	O	91	34			4.1	F	2			
7	28-Apr-15	1		10	MCC	O	53	19			1	M	2			
7	28-Apr-15	1		1	BSH		157				16.2	M	2			
8	29-Apr-15	1		1	TOP	O	136				31.6	F	2	200		19.5
8	29-Apr-15	1		1	MCC	O	51	19			0.8	M	2			
8	29-Apr-15	1		2	MCC	O	74	27			1.9	F	2			
8	29-Apr-15	1		3	MCC	O	81	30			2.7	F	3			
8	29-Apr-15	1		4	MCC	O	70	26			1.9	F	3			
8	29-Apr-15	1		5	MCC	O	89	30			3.1	F	2			
8	29-Apr-15	1		6	MCC	O	89	30			3.3	F	2			
8	29-Apr-15	1		7	MCC	O	76	27			2.2	F	2			
8	29-Apr-15	1		8	MCC	O	48	18			0.7	M	2			
8	29-Apr-15	1		9	MCC	O	70	25			1.5	F	2			
8	29-Apr-15	1		10	MCC	O	94	34			3.8	F	3			
9	29-Apr-15	1		1	TOP	O	146				39.3	F	2	150	DNA Sample	23.8
9	29-Apr-15	1		2	TOP	O	95				10.8	F	2	50	DNA Sample	6.3
9	29-Apr-15	1		3	TOP	O	132				31	M	2	100	DNA Sample	18.2
9	29-Apr-15	1		4	TOP	O	144				32.9	F	2	100	DNA Sample	18.6
9	29-Apr-15	1		5	TOP	O	121				21.1	M	2	40	DNA Sample	12
9	29-Apr-15	1		6	TOP	O	92				9.4	F	2	50		5.4
9	29-Apr-15	1		7	TOP	O	132				24	F	2	100		13.4
9	29-Apr-15	1		8	TOP		142				62	F	2	400	Caudal Fin Missing	35.8
9	29-Apr-15	1		9	TOP		82				5.7	M	1	10		3.1
9	29-Apr-15	1		10	TOP		149				39.2	F	2	160		22.5
9	29-Apr-15	1		11	TOP		86				6.2	M	1	10		3.8
9	29-Apr-15	1		12	TOP		86				7	M	1	10		4.1
9	29-Apr-15	1		13	TOP		138				31.3	F	2	100		17.2
9	29-Apr-15	1		14	TOP		122				19	F	2	100		10.8
9	29-Apr-15	1		15	TOP		158				55.6	F	2	200		30.8
9	29-Apr-15	1		16	TOP		141				34	M	2	50		20.6
9	29-Apr-15	1		17	TOP		113				19.7	M	2	50		11.2
9	29-Apr-15	1		18	TOP		119				18.2	M	2	40		10.9
9	29-Apr-15	1		19	TOP		133				29.9	F	2	100		16.8
9	29-Apr-15	1		20	TOP		141				35	F	2	250		20.5
9	29-Apr-15	1		21	TOP		99				11	F	1	20		6.8
9	29-Apr-15	1		22	TOP		90				8.2	F	1	40		4.7
9	29-Apr-15	1		23	TOP		122				25.2	M	2	50		14.7
9	29-Apr-15	1		1	MCC	O	50	17			0.5	F	1			
9	29-Apr-15	1		2	MCC	O	61	22			1	M	2			
9	29-Apr-15	1		3	MCC	O	71	27			2.4	F	3			
9	29-Apr-15	1		4	MCC	O	87	31			3.1	F	2			
9	29-Apr-15	1		5	MCC	O	52	19			0.8	F	1			
9	29-Apr-15	1		6	MCC	O	67	25			1.3	F	2			
9	29-Apr-15	1		7	MCC	O	57	20			1	F	1			
9	29-Apr-15	1		8	MCC	O	90	32			3.3	F	2			
9	29-Apr-15	1		9	MCC	O	93	33			3.6	F	2			
9	29-Apr-15	1		10	MCC	O	70	24			1.7	F	2			
10	29-Apr-15	1		1	MCC	O	85	30			2.8	F	2			
10	29-Apr-15	1		2	MCC	O	48	17			0.5	F	1			
10	29-Apr-15	1		3	MCC	O	86	30			2.8	F	3			
10	29-Apr-15	1		4	MCC	O	63	22			1.3	F	2			
10	29-Apr-15	1		5	MCC	O	78	30			2.6	F	3			
10	29-Apr-15	1		6	MCC	O	100	35			4.5	F	3			
10	29-Apr-15	1		7	MCC	O	83	34			4.4	F	3			
10	29-Apr-15	1		8	MCC	O	91	34			3.2	F	3			
10	29-Apr-15	1		9	MCC	O	34	13			0.2	M	1			
10	29-Apr-15	1		10	MCC	O	49	17			0.5	M	2			
10	29-Apr-15	1		1	BSH		238				35.6	F				
10	29-Apr-15	1		2	BSH		252				36.8	F				

**Table 9 (1) Biological data collected (2016)**

Set number	Date	Observer ID	Basket/Magazine No.	Serial No.	Species Code	Scale/Otolith/Both/Thorns	Total Length (cm)	Snout-Anus Length (cm)	Wingspan (cm)	Pelvic length (cm)	Weight (kg)	Sex	Maturity Stage	Gonad Weight (g)	Comments	HGT (Trunk weight) before freezing
13	03/03/2016	2		1	TOP	O	128				40.7	F	2	50		24.8
13	03/03/2016	2		2	TOP	O	102				12.5	F	1	5		7.3
13	03/03/2016	2		3	TOP	O	109				14.8	F	1	10		8.3
13	03/03/2016	2		4	TOP	O	161				63.2	F	2	260		39.6
13	03/03/2016	2		5	TOP	O	125				28.8	F	2	50		15.6
13	03/03/2016	2		6	TOP		118				22.5	F	2	30		12.3
13	03/03/2016	2		7	TOP		92				8.5	M	1	5		4.8
13	03/03/2016	2		8	TOP		127				25.4	F	2	50		14.8
13	03/03/2016	2		1	GRV			32			3.6					
13	03/03/2016	2		2	GRV			35			4.2					
13	03/03/2016	2		3	GRV			18			0.9					
13	03/03/2016	2		4	GRV			21			1.4					
13	03/03/2016	2		5	GRV			19			1					
13	03/03/2016	2		6	GRV			32			4					
13	03/03/2016	2		7	GRV			30			3.5					
13	03/03/2016	2		8	GRV			20			1.1					
13	03/03/2016	2		9	GRV			19			0.7					
13	03/03/2016	2		10	GRV			22			1.5					
13	03/03/2016	2		11	GRV			17			0.6					
13	03/03/2016	2		12	GRV			15			0.5					
13	03/03/2016	2		13	GRV			22			1.6					
13	03/03/2016	2		14	GRV			17			0.6					
13	03/03/2016	2		15	GRV			35			4.1					
13	03/03/2016	2		16	GRV			15			0.5					
13	03/03/2016	2		17	GRV			20			1.1					
13	03/03/2016	2		18	GRV			28			2					
13	03/03/2016	2		19	GRV			24			1.6					
13	03/03/2016	2		20	GRV			23			1.5					
13	03/03/2016	2		21	GRV			18			1					
13	03/03/2016	2		22	GRV			18			0.9					
13	03/03/2016	2		23	GRV			19			1.1					
13	03/03/2016	2		24	GRV			16			0.7					
13	03/03/2016	2		25	GRV			27			1.7					
13	03/03/2016	2		26	GRV			18			1					
13	03/03/2016	2		27	GRV			22			2.2					
13	03/03/2016	2		28	GRV			23			2.4					
13	03/03/2016	2		29	GRV			20			2.1					
13	03/03/2016	2		30	GRV			20			2.1					
13	03/03/2016	2		31	GRV			14			0.4					
13	03/03/2016	2		32	GRV			17			0.6					
13	03/03/2016	2		33	GRV			13			0.3					
13	03/03/2016	2		34	GRV			17			0.6					
13	03/03/2016	2		35	GRV			20			1					
13	03/03/2016	2		36	GRV			16			0.5					
13	03/03/2016	2		37	GRV			19			1					
13	03/03/2016	2		38	GRV			19			1					
13	03/03/2016	2		39	GRV			24			1.4					
13	03/03/2016	2		40	GRV			16			0.6					
13	03/03/2016	2		41	GRV			18			0.9					
13	03/03/2016	2		42	GRV			18			0.8					
13	03/03/2016	2		43	GRV			17			0.7					
13	03/03/2016	2		44	GRV			16			0.6					
13	03/03/2016	2		45	GRV			19			1					
13	03/03/2016	2		46	GRV			18			0.9					
13	03/03/2016	2		1	KCX		18				1.8				RELEASED	
13	03/03/2016	2		2	KCX		18				1.7				RELEASED	
13	03/03/2016	2		1	ANT		48				1					
13	03/03/2016	2		2	ANT		62				1.5					
13	03/03/2016	2		3	ANT		42				0.5					
13	03/03/2016	2		4	ANT		60				1.3					
14	03/03/2016	1		1	TOP	O	95				10.4	F	2	60		6.2
14	03/03/2016	1		2	TOP	O	148				45.2	F	2	50		28.3
14	03/03/2016	1		3	TOP	O	85				8.1	F	2	40		4.2
14	03/03/2016	1		4	TOP	O	120				23.1	F	2	30		13.8
14	03/03/2016	1		5	TOP	O	106				14.8	F	2	40		8.4
14	03/03/2016	1		6	TOP		111				14.9	F	2	30		8.3
14	03/03/2016	1		7	TOP		90				8	F	1	5		4.7
14	03/03/2016	1		8	TOP		113				19.5	M	2	20		10.7
14	03/03/2016	1		9	TOP		133				30.6	F	2	50		17.4
14	03/03/2016	1		1	MCC			21			1					
14	03/03/2016	1		2	MCC			16			0.4					
14	03/03/2016	1		3	MCC			18			0.5					
14	03/03/2016	1		4	MCC			23			1.1					
14	03/03/2016	1		5	MCC			20			0.9					
14	03/03/2016	1		6	MCC			25			2.1					
14	03/03/2016	1		7	MCC			22			1.1					
14	03/03/2016	1		8	MCC			19			0.8					
14	03/03/2016	1		9	MCC			22			1.9					
14	03/03/2016	1		10	MCC			21			1					
14	03/03/2016	1		11	MCC			32			3.5					
14	03/03/2016	1		12	MCC			27			2.8					
14	03/03/2016	1		13	MCC			28			2.2					
14	03/03/2016	1		14	MCC			33			3.7					
14	03/03/2016	1		15	MCC			30			3					
14	03/03/2016	1		16	MCC			32			3					
14	03/03/2016	1		17	MCC			22			1.2					
14	03/03/2016	1		18	MCC			17			0.8					
14	03/03/2016	1		19	MCC			31			3.2					
14	03/03/2016	1		20	MCC			34			4.1					

Table 9 (2) Biological data collected (2016)

Set number	Date	Observer ID	Basket/Magazine No.	Serial No.	Species Code	Scale/Otolith/Both/Thor	Total Length (cm)	Snout-Anus length	Wingspan (cm)	Pelvic length (cm)	Weight (kg)	Sex	Maturity Stage	Gonad Weight (g)	Comments	HGT (Trunk weight) before freezing
14	03/03/2016	1		21	MCC			33			3.6					
14	03/03/2016	1		22	MCC			22			1.9					
14	03/03/2016	1		23	MCC			20			0.9					
14	03/03/2016	1		24	MCC			30			2.9					
14	03/03/2016	1		25	MCC			28			2.8					
14	03/03/2016	1		26	MCC			23			1.2					
14	03/03/2016	1		27	MCC			23			1.2					
14	03/03/2016	1		28	MCC			34			1.6					
14	03/03/2016	1		29	MCC			18			0.9					
14	03/03/2016	1		30	MCC			26			2.2					
14	03/03/2016	1		31	MCC	O		33			3.8	F	3	160		
14	03/03/2016	1		32	MCC	O		25			2.2	F	3	120		
14	03/03/2016	1		33	MCC	O		28			2.5	F	2	80		
14	03/03/2016	1		34	MCC	O		29			2.9	F	3	170		
14	03/03/2016	1		35	MCC	O		30			3.8	F	2	60		
14	03/03/2016	1		36	MCC	O		34			4.6	F	3	360		
14	03/03/2016	1		37	MCC	O		35			4	F	3	190		
14	03/03/2016	1		38	MCC	O		32			4.5	F	3	210		
14	03/03/2016	1		39	MCC	O		33			4.5	F	3	410		
14	03/03/2016	1		40	MCC	O		29			3.1	F	3	190		
14	03/03/2016	1		41	GRV			31			3.4	F	3			
14	03/03/2016	1		1	ANT	O	59				1.5	F	1	5		
14	03/03/2016	1		2	ANT		60				2					
14	03/03/2016	1		1	KCX		17				1.6				RELEASED	
14	03/03/2016	1		1	CGE		15				1.8				RELEASED	
14	03/03/2016	1		2	CGE		14				1.2				RELEASED	
15	04/03/2016	2		1	TOP	O	102				12.4	F	1	5		7.4
15	04/03/2016	2		2	TOP	O	108				15.6	F	2	40		8.9
15	04/03/2016	2		1	MCC	O		30			3.3	F	2	120		
15	04/03/2016	2		2	MCC	O		18			0.7	M	1	70		
15	04/03/2016	2		3	MCC	O		32			3.5	F	3	240		
15	04/03/2016	2		4	MCC	O		20			1	F	2	30		
15	04/03/2016	2		5	MCC	O		16			0.6	F	1	5		
15	04/03/2016	2		6	MCC			29			2.9	F	3	280		
15	04/03/2016	2		7	MCC			32			4	F	3	320		
15	04/03/2016	2		8	MCC			39			3.6	F	3	260		
15	04/03/2016	2		9	MCC			30			3.4	F	3	280		
15	04/03/2016	2		10	MCC			26			2.5	F	3	250		
15	04/03/2016	2		11	MCC			16			0.5	F	1	10		
15	04/03/2016	2		12	MCC			22			1.5	M	1	50		
15	04/03/2016	2		13	MCC			17			0.6	F	1	30		
15	04/03/2016	2		14	MCC			18			0.8	F	1	30		
15	04/03/2016	2		15	MCC			18			0.9	F	1	50		
15	04/03/2016	2		16	MCC			17			0.8	F	1	20		
15	04/03/2016	2		17	MCC			19			1.1	M	2	80		
15	04/03/2016	2		18	MCC			32			3.1	F	3	240		
15	04/03/2016	2		19	MCC			14			0.5	M	1	5		
15	04/03/2016	2		20	MCC			31			3.3	F	3	290		
15	04/03/2016	2		21	MCC			18			0.9	F	1	50		
15	04/03/2016	2		22	MCC			18			0.9	F	1	60		
15	04/03/2016	2		23	MCC			17			0.7	F	1	30		
15	04/03/2016	2		24	MCC			19			0.8	F	1	40		
15	04/03/2016	2		25	MCC			33			3.9	F	3	300		
15	04/03/2016	2		26	MCC			27			2.3	F	2	230		
15	04/03/2016	2		27	MCC			16			0.5	M	1	5		
15	04/03/2016	2		28	MCC			34			4.3	F	3	410		
15	04/03/2016	2		29	MCC			27			2.7	F	3	290		
15	04/03/2016	2		30	MCC			19			0.8	F	1	20		
15	04/03/2016	2		31	MCC			22			1.4					
15	04/03/2016	2		32	MCC			20			1					
15	04/03/2016	2		33	MCC			19			0.9					
15	04/03/2016	2		34	MCC			18			0.8					
15	04/03/2016	2		35	MCC			25			1.5					
15	04/03/2016	2		36	MCC			21			1.1					
15	04/03/2016	2		37	MCC			20			1					
15	04/03/2016	2		38	MCC			14			0.3					
15	04/03/2016	2		39	MCC			12			0.1					
15	04/03/2016	2		40	MCC			13			0.2					
15	04/03/2016	2		41	MCC			19			0.8					
15	04/03/2016	2		1	KCX		12				0.5				RELEASED	
16	03/03/2016	2		1	TOP	O	117				23.7	F	2	100		12.8
16	03/03/2016	2		2	TOP	O	88				7.7	F	1	5		4.2
16	03/03/2016	2		3	TOP	O	71				3.6	F	1	2		1.9
16	03/03/2016	2		4	TOP	O	94				10.5	F	1	5		5.8
16	03/03/2016	2		5	TOP	O	127				32.1	F	2	40		18.8
16	03/03/2016	2		6	TOP		90				13.2	F	2	20		7.6
16	03/03/2016	2		7	TOP		78				4.4	F	1	5		2.4
16	03/03/2016	2		8	TOP		91				8.6	M	2	5		4.7
16	03/03/2016	2		9	TOP		135				30.3	F	2	80		18.1
16	03/03/2016	2		1	GRV			26			2.3					
16	03/03/2016	2		2	GRV			16			0.5					
16	03/03/2016	2		3	GRV			19			0.9					
16	03/03/2016	2		4	GRV			22			1.5					
16	03/03/2016	2		5	GRV			18			0.9					
16	03/03/2016	2		6	GRV			28			3					
16	03/03/2016	2		7	GRV			20			1.5					
16	03/03/2016	2		8	GRV			19			1					
16	03/03/2016	2		9	GRV			15			0.5					

**Table 9 (3) Biological data collected (2016)**

Set number	Date	Observer ID	Basket/Magazine No.	Serial No.	Species Code	Scale/Otolith/Both/Thor	Total Length (cm)	Snout-Anus length	Wingspan (cm)	Pelvic length (cm)	Weight (kg)	Sex	Maturity Stage	Gonad Weight (g)	Comments	HGT (Trunk weight) before freezing
18	04/03/2016	2		16	MCC			33			4	F	3	280		
18	04/03/2016	2		17	MCC			28			2.6	F	2	120		
18	04/03/2016	2		18	MCC			20			1	F	1	5		
18	04/03/2016	2		19	MCC			30			2.5	F	2	180		
18	04/03/2016	2		20	MCC			26			2.3	M	2	40		
18	04/03/2016	2		21	MCC			23			1.5	M	1	5		
18	04/03/2016	2		22	MCC			17			0.6	M	1	2		
18	04/03/2016	2		23	MCC			24			2	F	2	80		
18	04/03/2016	2		24	MCC			31			3.2	F	3	220		
18	04/03/2016	2		25	MCC			15			0.5	M	1	2		
18	04/03/2016	2		26	MCC			16			0.6	M	1	2		
18	04/03/2016	2		27	MCC			17			0.6	M	1	2		
18	04/03/2016	2		1	CGE		14				1.3				RELEASED	
18	04/03/2016	2		1	ANT	O	62				1.9	M	1	5		
19	05/03/2016	1		1	MCC	O		27			2.1	F	2	80		
19	05/03/2016	1		2	MCC	O		25			2	F	2	20		
19	05/03/2016	1		3	MCC	O		19			1.4	M	2	10		
19	05/03/2016	1		4	MCC	O		23			1.5	M	5	5		
19	05/03/2016	1		5	MCC	O		22			1.4	F	2	2		
19	05/03/2016	1		6	MCC			20			1	F	2	5		
19	05/03/2016	1		7	MCC			18			0.7	F	1	2		
19	05/03/2016	1		8	MCC			16			0.5	M	1	2		
19	05/03/2016	1		9	MCC			16			0.5	M	1	2		
19	05/03/2016	1		10	MCC			19			0.8	F	2	5		
19	05/03/2016	1		11	MCC			22			1.5	M	3	20		
19	05/03/2016	1		12	MCC			21			1.1	M	2	10		
19	05/03/2016	1		13	MCC			19			1	F	2	5		
19	05/03/2016	1		14	MCC			25			2	F	2	10		
19	05/03/2016	1		15	MCC			26			2.1	F	3	60		
19	05/03/2016	1		16	MCC			18			0.9	M	2	5		
19	05/03/2016	1		17	MCC			16			0.4	M	1	2		
19	05/03/2016	1		18	MCC			33			3.5	F	3	160		
19	05/03/2016	1		19	MCC			18			1	F	2	15		
19	05/03/2016	1		20	MCC			31			3.1	F	3	80		
19	05/03/2016	1		21	MCC			18			0.6					
19	05/03/2016	1		22	MCC			21			0.9					
19	05/03/2016	1		23	MCC			22			1.1					
19	05/03/2016	1		24	MCC			23			1.6					
19	05/03/2016	1		25	MCC			20			1					
19	05/03/2016	1		26	MCC			22			1.3					
19	05/03/2016	1		27	MCC			24			1.5					
19	05/03/2016	1		28	MCC			26			1.8					
19	05/03/2016	1		29	MCC			17			0.5					
19	05/03/2016	1		30	MCC			19			0.8					
19	05/03/2016	1		1	CGE		15				1.1					
20	05/03/2016	2		1	TOP	O	114				18.4	F	2	80		10.6
20	05/03/2016	2		2	TOP	O	124				28.4	M	2	40		17.6
20	05/03/2016	2		3	TOP	O	134				29.6	F	2	30		17.8
20	05/03/2016	2		4	TOP	O	97				9.8	M	1	5		5.6
20	05/03/2016	2		1	MCC	O		18			1	M	1	5		
20	05/03/2016	2		2	MCC	O		23			1.5	F	2	30		
20	05/03/2016	2		3	MCC	O		15			0.4	M	1	2		
20	05/03/2016	2		4	MCC	O		26			2.4	F	2	50		
20	05/03/2016	2		5	MCC	O		33			3.2	F	2	180		
20	05/03/2016	2		6	MCC			15			0.6	M	1	2		
20	05/03/2016	2		7	MCC			16			0.7	M	1	2		
20	05/03/2016	2		8	MCC			28			2.9	F	3	180		
20	05/03/2016	2		9	MCC			30			2.6	F	2	60		
20	05/03/2016	2		10	MCC			29			2.6	F	2	40		
20	05/03/2016	2		11	MCC			20			1	F	1	5		
20	05/03/2016	2		12	MCC			20			1	M	1	5		
20	05/03/2016	2		13	MCC			22			1.1	M	1	5		
20	05/03/2016	2		14	MCC			16			0.6	M	1	2		
20	05/03/2016	2		15	MCC			26			2	M	2	20		
20	05/03/2016	2		16	MCC			18			0.9	F	1	5		
20	05/03/2016	2		17	MCC			24			2.2	F	2	30		
20	05/03/2016	2		18	MCC			33			2.8	F	3	190		
20	05/03/2016	2		19	MCC			28			2.4	F	2	100		
20	05/03/2016	2		20	MCC			17			0.7	M	1	2		
20	05/03/2016	2		21	MCC			16			0.7	F	1	2		
20	05/03/2016	2		22	MCC			19			0.8	M	1	5		
20	05/03/2016	2		23	MCC			21			1	M	1	5		
20	05/03/2016	2		24	MCC			26			2.3	M	2	40		
20	05/03/2016	2		25	MCC			21			0.9	F	2	20		
20	05/03/2016	2		26	MCC			30			2.7	F	2	40		
20	05/03/2016	2		27	MCC			16			0.5	M	1	2		
20	05/03/2016	2		28	MCC			15			0.5	F	1	5		
20	05/03/2016	2		29	MCC			22			1.2	F	1	5		
20	05/03/2016	2		30	MCC			18			0.9	F	1	5		
20	05/03/2016	2		31	MCC			24			2.2					
20	05/03/2016	2		1	ANT	O	55				1.5	F	1	5		
20	05/03/2016	2		2	ANT	O	57				1.5	F	1	5		
20	05/03/2016	2		3	ANT	O	64				2.5	F	2	10		
20	05/03/2016	2		4	ANT	O	60				2	F	1	5		

**Table 9 (4) Biological data collected (2016)**

Set number	Date	Observer ID	Basket/Magazine No.	Serial No.	Species Code	Scale/Otolith/Both/Thor	Total Length (cm)	Snout-Anus length	Wingspan (cm)	Pelvic length (cm)	Weight (kg)	Sex	Maturity Stage	Gonad Weight (g)	Comments	HGT (Trunk weight) before freezing
18	04/03/2016	2		16	MCC			33			4	F	3	280		
18	04/03/2016	2		17	MCC			28			2.6	F	2	120		
18	04/03/2016	2		18	MCC			20			1	F	1	5		
18	04/03/2016	2		19	MCC			30			2.5	F	2	180		
18	04/03/2016	2		20	MCC			26			2.3	M	2	40		
18	04/03/2016	2		21	MCC			23			1.5	M	1	5		
18	04/03/2016	2		22	MCC			17			0.6	M	1	2		
18	04/03/2016	2		23	MCC			24			2	F	2	80		
18	04/03/2016	2		24	MCC			31			3.2	F	3	220		
18	04/03/2016	2		25	MCC			15			0.5	M	1	2		
18	04/03/2016	2		26	MCC			16			0.6	M	1	2		
18	04/03/2016	2		27	MCC			17			0.6	M	1	2		
18	04/03/2016	2		1	CGE		14				1.3				RELEASED	
18	04/03/2016	2		1	ANT	O	62				1.9	M	1	5		
19	05/03/2016	1		1	MCC	O		27			2.1	F	2	80		
19	05/03/2016	1		2	MCC	O		25			2	F	2	20		
19	05/03/2016	1		3	MCC	O		19			1.4	M	2	10		
19	05/03/2016	1		4	MCC	O		23			1.5	M	5	5		
19	05/03/2016	1		5	MCC	O		22			1.4	F	2	2		
19	05/03/2016	1		6	MCC			20			1	F	2	5		
19	05/03/2016	1		7	MCC			18			0.7	F	1	2		
19	05/03/2016	1		8	MCC			16			0.5	M	1	2		
19	05/03/2016	1		9	MCC			16			0.5	M	1	2		
19	05/03/2016	1		10	MCC			19			0.8	F	2	5		
19	05/03/2016	1		11	MCC			22			1.5	M	3	20		
19	05/03/2016	1		12	MCC			21			1.1	M	2	10		
19	05/03/2016	1		13	MCC			19			1	F	2	5		
19	05/03/2016	1		14	MCC			25			2	F	2	10		
19	05/03/2016	1		15	MCC			26			2.1	F	3	60		
19	05/03/2016	1		16	MCC			18			0.9	M	2	5		
19	05/03/2016	1		17	MCC			16			0.4	M	1	2		
19	05/03/2016	1		18	MCC			33			3.5	F	3	160		
19	05/03/2016	1		19	MCC			18			1	F	2	15		
19	05/03/2016	1		20	MCC			31			3.1	F	3	80		
19	05/03/2016	1		21	MCC			18			0.6					
19	05/03/2016	1		22	MCC			21			0.9					
19	05/03/2016	1		23	MCC			22			1.1					
19	05/03/2016	1		24	MCC			23			1.6					
19	05/03/2016	1		25	MCC			20			1					
19	05/03/2016	1		26	MCC			22			1.3					
19	05/03/2016	1		27	MCC			24			1.5					
19	05/03/2016	1		28	MCC			26			1.8					
19	05/03/2016	1		29	MCC			17			0.5					
19	05/03/2016	1		30	MCC			19			0.8					
19	05/03/2016	1		1	CGE		15				1.1					
20	05/03/2016	2		1	TOP	O	114				18.4	F	2	80		10.6
20	05/03/2016	2		2	TOP	O	124				28.4	M	2	40		17.6
20	05/03/2016	2		3	TOP	O	134				29.6	F	2	30		17.8
20	05/03/2016	2		4	TOP	O	97				9.8	M	1	5		5.6
20	05/03/2016	2		1	MCC	O		18			1	M	1	5		
20	05/03/2016	2		2	MCC	O		23			1.5	F	2	30		
20	05/03/2016	2		3	MCC	O		15			0.4	M	1	2		
20	05/03/2016	2		4	MCC	O		26			2.4	F	2	50		
20	05/03/2016	2		5	MCC	O		33			3.2	F	2	180		
20	05/03/2016	2		6	MCC			15			0.6	M	1	2		
20	05/03/2016	2		7	MCC			16			0.7	M	1	2		
20	05/03/2016	2		8	MCC			28			2.9	F	3	180		
20	05/03/2016	2		9	MCC			30			2.6	F	2	60		
20	05/03/2016	2		10	MCC			29			2.6	F	2	40		
20	05/03/2016	2		11	MCC			20			1	F	1	5		
20	05/03/2016	2		12	MCC			20			1	M	1	5		
20	05/03/2016	2		13	MCC			22			1.1	M	1	5		
20	05/03/2016	2		14	MCC			16			0.6	M	1	2		
20	05/03/2016	2		15	MCC			26			2	M	2	20		
20	05/03/2016	2		16	MCC			18			0.9	F	1	5		
20	05/03/2016	2		17	MCC			24			2.2	F	2	30		
20	05/03/2016	2		18	MCC			33			2.8	F	3	190		
20	05/03/2016	2		19	MCC			28			2.4	F	2	100		
20	05/03/2016	2		20	MCC			17			0.7	M	1	2		
20	05/03/2016	2		21	MCC			16			0.7	F	1	2		
20	05/03/2016	2		22	MCC			19			0.8	M	1	5		
20	05/03/2016	2		23	MCC			21			1	M	1	5		
20	05/03/2016	2		24	MCC			26			2.3	M	2	40		
20	05/03/2016	2		25	MCC			21			0.9	F	2	20		
20	05/03/2016	2		26	MCC			30			2.7	F	2	40		
20	05/03/2016	2		27	MCC			16			0.5	M	1	2		
20	05/03/2016	2		28	MCC			15			0.5	F	1	5		
20	05/03/2016	2		29	MCC			22			1.2	F	1	5		
20	05/03/2016	2		30	MCC			18			0.9	F	1	5		
20	05/03/2016	2		31	MCC			24			2.2					
20	05/03/2016	2		1	ANT	O	55				1.5	F	1	5		
20	05/03/2016	2		2	ANT	O	57				1.5	F	1	5		
20	05/03/2016	2		3	ANT	O	64				2.5	F	2	10		
20	05/03/2016	2		4	ANT	O	60				2	F	1	5		

Table 9 (5) Biological data collected (2016)

Set number	Date	Observer ID	Basket/Magazine No.	Serial No.	Species Code	Scale/Otolith/Both/Thor	Total Length (cm)	Snout-Anus Length	Wingspan (cm)	Pelvic length (cm)	Weight (kg)	Sex	Maturity Stage	Gonad Weight (g)	Comments	HGT (Trunk weight) before freezing
21	06/03/2016	2		1	TOP	O	103				13.3	F	1	5		7.9
21	06/03/2016	2		2	TOP	O	121				21.3	M	2	30		12.9
21	06/03/2016	2		3	TOP	O	122				29	F	2	50		16.6
21	06/03/2016	2		4	TOP	O	124				19.4	F	2	40		10.7
21	06/03/2016	2		5	TOP	O	128				27.5	F	2	40		15.6
21	06/03/2016	2		6	TOP		108				14.3	F	2	20		8.3
21	06/03/2016	2		7	TOP		129				25.2	M	2	30		14.9
21	06/03/2016	2		8	TOP		134				36.3	F	2	50		22.2
21	06/03/2016	2		9	TOP		145				48.7	F	2	200		31
21	06/03/2016	2		10	TOP		141				38.3	F	2	40		22.3
21	06/03/2016	2		11	TOP		130				25.2	F	2	30		14.1
21	06/03/2016	2		12	TOP		101				12.3	F	1	5		7.3
21	06/03/2016	2		13	TOP		135				30.3	M	2	40		17.6
21	06/03/2016	2		14	TOP		123				19.7	M	2	20		11.7
21	06/03/2016	2		15	TOP		98				10.6	M	1	5		5.9
21	06/03/2016	2		16	TOP		143				40.1	F	2	180		23.3
21	06/03/2016	2		17	TOP		104				11.5	F	1	5		6.7
21	06/03/2016	2		18	TOP		112				16.7	F	2	20		9.7
21	06/03/2016	2		19	TOP		136				27.5	F	2	50		15.3
21	06/03/2016	2		1	MCC	O		20			0.9	M	1	2		
21	06/03/2016	2		2	MCC	O		21			1.5	M	1	5		
21	06/03/2016	2		3	MCC	O		23			1.5	F	1	5		
21	06/03/2016	2		4	MCC	O		20			1.1	M	1	2		
21	06/03/2016	2		5	MCC	O		22			1.4	M	1	5		
21	06/03/2016	2		6	MCC			19			1	M	1	2		
21	06/03/2016	2		7	MCC			16			0.6	M	1	2		
21	06/03/2016	2		8	MCC			8			1	F	1	2		
21	06/03/2016	2		9	MCC			8			0.8	F	1	2		
21	06/03/2016	2		10	MCC			17			0.6	F	1	2		
21	06/03/2016	2		11	MCC			16			0.5	M	1	2		
21	06/03/2016	2		12	MCC			17			0.6	F	1	2		
21	06/03/2016	2		13	MCC			17			0.6	F	1	2		
21	06/03/2016	2		14	MCC			22			1.1	M	1	2		
21	06/03/2016	2		15	MCC			18			0.9	M	1	2		
21	06/03/2016	2		16	MCC			14			0.3	F	1	2		
21	06/03/2016	2		17	MCC			20			1	F	1	2		
21	06/03/2016	2		18	MCC			17			0.7	M	1	2		
21	06/03/2016	2		19	MCC			20			1.1	F	1	2		
21	06/03/2016	2		20	MCC			19			0.8	M	1	2		
21	06/03/2016	2		21	MCC			23			1.2	F	1	2		
21	06/03/2016	2		22	MCC			17			0.7	F	1	2		
21	06/03/2016	2		23	MCC			22			1.2	F	1	2		
21	06/03/2016	2		24	MCC			20			0.9	M	1	2		
21	06/03/2016	2		25	MCC			19			0.8	F	1	2		
21	06/03/2016	2		26	MCC			19			0.9	M	1	2		
21	06/03/2016	2		27	MCC			15			0.5	M	1	2		
21	06/03/2016	2		28	MCC			17			0.6	F	1	2		
21	06/03/2016	2		29	MCC			23			0.5	F	1	2		
21	06/03/2016	2		30	MCC			21			1	M	1	2		
21	06/03/2016	2		1	MRL	O	49				0.7	F	1	10		
21	06/03/2016	2		1	ANT	O	53				1.2	M	2	15		
21	06/03/2016	2		2	CGE		13				1.3					
22	06/03/2016	2		1	TOP	O	140				36.7	F	2	150		20.9
22	06/03/2016	2		2	TOP	O	133				33.2	F	2	140		18.7
22	06/03/2016	2		3	TOP	O	127				23.9	F	2	40		14.1
22	06/03/2016	2		4	TOP	O	112				17.9	F	2	30		9.6
22	06/03/2016	2		5	TOP	O	105				14.6	F	2	20		8.4
22	06/03/2016	2		6	TOP		104				12.1	F	1	5		6.8
22	06/03/2016	2		7	TOP		128				26.5	F	2	110		14.1
22	06/03/2016	2		8	TOP		100				10.8	F	1	5		6.4
22	06/03/2016	2		9	TOP		131				29.8	M	2	20		17.8
22	06/03/2016	2		10	TOP		133				27.6	F	2	40		15.3
22	06/03/2016	2		11	TOP		130				35	M	2	40		21.1
22	06/03/2016	2		12	TOP		132				30.4	F	2	80		17.4
22	06/03/2016	2		13	TOP		132				30.7	F	2	100		17.5
22	06/03/2016	2		14	TOP		141				39.6	F	2	120		22.6
22	06/03/2016	2		15	TOP		89				8.2	M	1	5		4.8
22	06/03/2016	2		16	TOP		132				27.7	F	2	100		16
22	06/03/2016	2		17	TOP		160				52.1	F	2	200		29.1
22	06/03/2016	2		18	TOP		136				30.7	F	2	100		17.5
22	06/03/2016	2		19	TOP		104				13.7	F	2	10		8
22	06/03/2016	2		20	TOP		102				13.5	F	2	5		8.5
22	06/03/2016	2		1	MCC	O		23			1.9	M	4	40		
22	06/03/2016	2		2	MCC	O		29			2.4	F	2	180		
22	06/03/2016	2		3	MCC	O		20			1.2	M	1	5		
22	06/03/2016	2		4	MCC	O		24			1.6	F	1	5		
22	06/03/2016	2		5	MCC	O		33			3.2	F	3	200		
22	06/03/2016	2		6	MCC			23			1.7	M	2	10		
22	06/03/2016	2		7	MCC			34			3.5	F	3	200		
22	06/03/2016	2		8	MCC			32			3.6	F	3	200		
22	06/03/2016	2		9	MCC			30			3	F	3	190		
22	06/03/2016	2		10	MCC			33			3.1	F	3	200		
22	06/03/2016	2		11	MCC			32			3.5	F	3	80		
22	06/03/2016	2		12	MCC			27			2.2	F	2	60		
22	06/03/2016	2		13	MCC			20			1.1	F	1	2		
22	06/03/2016	2		14	MCC			19			1	M	1	2		
22	06/03/2016	2		15	MCC			32			3.5	F	3	210		
22	06/03/2016	2		16	MCC			31			3.5	F	3	160		
22	06/03/2016	2		17	MCC			33			3.3	F	3	190		
22	06/03/2016	2		18	MCC			30			2.6	F	3	200		
22	06/03/2016	2		19	MCC			28			2.6	F	3	160		
22	06/03/2016	2		20	MCC			30			3.2	F	5	40		
22	06/03/2016	2		21	MCC			28			2.6	F	2	120		
22	06/03/2016	2		22	MCC			22			1.1	F	1	5		
22	06/03/2016	2		23	MCC			23			1.5	M	1	5		
22	06/03/2016	2		24	MCC			24			1.7	M	2	10		
22	06/03/2016	2		25	MCC			24			1.4	M	1	5		
22	06/03/2016	2		26	MCC			25			1.6	M	2	10		
22	06/03/2016	2		27	MCC			21			1	M	1	2		
22	06/03/2016	2		28	MCC			18			0.9	M	1	2		
22	06/03/2016	2		29	MCC			24			1.6	M	2	10		
22	06/03/2016	2		30	MCC			14			0.5	F	1	2		
22	06/03/2016	2		31	MCC			16			0.5					
22	06/03/2016	2		32	MCC			18			0.9					
22	06/03/2016	2		33	MCC			30			3					
22	06/03/2016	2		34	MCC			31			2.9					
22	06/03/2016	2		35	MCC			28			2.5					
22	06/03/2016	2		36	MCC			23			1.7					
22	06/03/2016	2		37	MCC			15			0.6					
22	06/03/2016	2		38	MCC			18			0.6					
22	06/03/2016	2		39	MCC			17			0.6					
22	06/03/2016															



**APPENDIX XIII – Proposal for exploratory fishing within the SEAFO CA during 2017****PLAN OF EXPLORATORY FISHING IN NEW BOTTOM FISHING GROUND  
IN THE SEAFO CONVENTION AREA IN 2017**

Japan  
October, 2016

9.10

**1. INTRODUCTION**

In 2011, existing bottom fishing areas have been identified in response to 2006 UNGA resolution 61/105. This has resulted to split some of fishable sea mountains shallower than 2,000 m such as Discovery Seamounts into existing and new bottom fishing areas.

There is no clear geographical (seafloor-topological) boundary around the Discovery Seamount. Hence it is considered that fish might move across the boundary of existing and new bottom fishing areas. Furthermore, VME information, fish distribution, detailed sea bed map, etc. in new bottom fishing areas will never be known unless exploratory fishing activities occur there.

We believe that collecting such primary information in new bottom fishing areas is meaningful and accumulating such information could contribute to achieve the objective of the SEAFO Convention to ensure the long term conservation and sustainable use of fishery resources.

**2. OBJECTIVES**

Under such circumstances, the primary objectives of this exploratory fishing are to investigate Patagonian toothfish resources using some part of TAC and to evaluate if this exploratory fishing produces Significant Adverse Impact (SAI) on VME species

### 3. SPECIFICATIONS OF THE EXPLORATORY FISHING

(1) Target Species

*Dissosticus* spp. (Patagonian toothfish)

(2) Period

March-August, 2017 changeable due to fishing conditions.

(3) Areas (BOX 1)

**Discovery area (five 1°x1° areas)**

S41-42°W1-0°

S41-42°E2-3°

S42-43°W1-0°

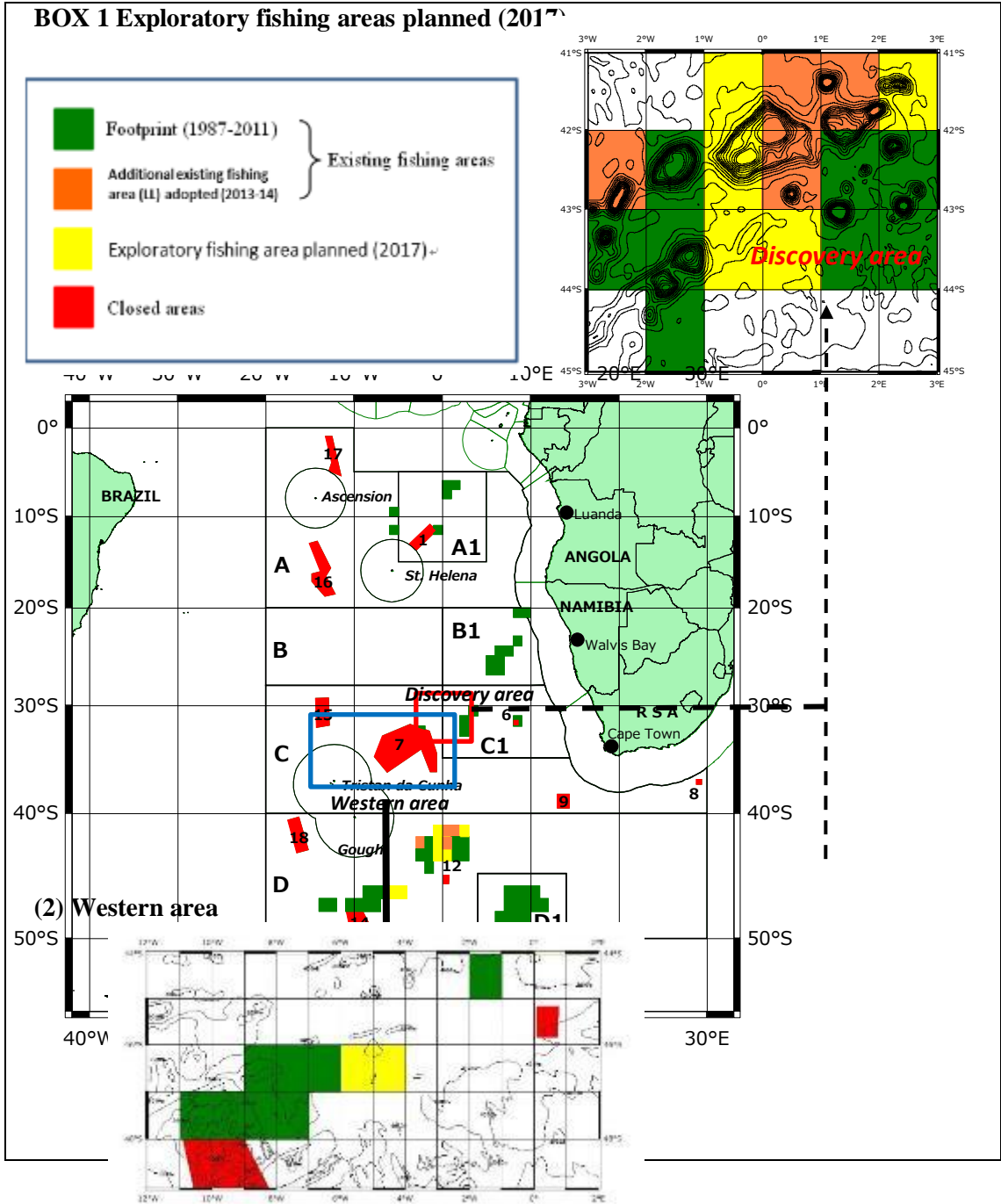
S43-44°W1-0°

S43-44°0-E1°

**Western area (two 1°x1° areas)**

S46-47°W6-5°

S46-47° W5-4°



**(4) Exploratory Bottom Fishing Protocol**

The exploratory fishing will fully comply relevant Exploratory Bottom Fishing Protocols stipulated in Articles 6 (Exploratory bottom fishing) and Article 7 (Assessment Exploratory Bottom Fishing Activities) in Conservation Measure (CM) 30/15.

**(5) Coverage (area to be surveyed)**

The exploratory fishing will be conducted by following 2 steps, in order to cover as many as representative areas as possible in the fisherable zone, i.e., 2,000m or shallower waters.

**Step 1**

On the first entry of the research area, the first 10 hauls shall be research hauls and must satisfy following criteria.

- Each research haul must be separated by not less than 3 nautical miles (NM) from any other research haul, distance to be measured from the geographical mid-point of each research haul.
- Each haul shall comprise at least 3,500 hooks and no more than 5,000 hooks.
- Each haul shall have a soak time of not less than 6 hours, measured from the time of completion of the setting process to the beginning of the hauling process.

**Step 2**

On completion of 10 research hauls, the vessel will continue the exploratory fishing in order to cover as many as representative areas as possible in the fisherable zone, i.e., 2,000m or shallower waters.

**(6) Observer**

One observer will be assigned to collect necessary information described in this proposal, which will be reported to the SEAFO Secretariat and presented in the 2017 Scientific Committee meeting.

**(7) Data collection**

The observer will collect the following data while the vessel is engaged in exploratory fishing. In the exploratory fishing, more scientific information is collected than in commercial fishing in order to fulfil requirements stipulated in the Exploratory Bottom Fishing Protocol (Article 6 and 7 in CM 30/15) (Table 1).

- Patagonian tooth fish (*Dissosticus eleginoides*)
  - Total catch in weight/line
  - Length measurement / Maximum 50fish/line
  - Weight, sex, maturity, gonad state / Maximum 30fish/line
- Rattail (*Macrourid spp.*)
  - Total catch in weight/line
  - Length and weight measurement / Maximum 10pcs/line
- Other by-catch species
  - Total catch in weight/line by the lowest taxon possible

Table 1 Comparisons of data collection between exploratory fishing and commercial fishing.

Data collection				
Commercial fishng (Existing bottom fishing area)			Exploratory fishing (New bottom fishing area)	
Patagonian toothfish			Patagonian toothfish	
Type	Quatinty		Type	Quatinty
Total cathch weight / line			Total cathch weight / line	
Length	20 samples/line		Length	50 samples/line
Gonad stages	20 samples/line		Gonad stages	30 samples/line
Gonad weight	20 samples/line		Gonad weight	30 samples/line
Individual weight	20 samples/line		Individual weight	30 samples/line
Sex	20 samples/line		Sex	30 samples/line
Otoliths	5 samples/line		Otoliths	5 samples/line
Bycatch species			Rat tail	
Number of each speices / line			Total cathch weight / line	
			Length	10 samples/line
			Individual weight	10 samples/line
			Bycatch species excepted Rat tail	
			Number of each speices / line	

- VME

VME data according to interim VME data collection protocol set out in Annex 4 of Conservation Measure 30/15.

**(8) Mitigation plan to prevent significant adverse impact to VME species.**

The exploratory fishing will fully comply the encounter protocol stipulated in Article 8 (Encounters with possible VMEs) and Annex 6 (VME Indicators and threshold levels) in CM 30/15.

The vessel has been using Trot line fishing method in the Convention area. During the exploratory fishing in new bottom fishing area, the vessel will employ the same fishing method.

**Fishing gear configuration (Fig. 1)**

- 201 drop lines per standard main line of 9,000m (one drop line every 45m of the main line).
- One drop line has 5 clusters with 5 snoods and hooks = 25 hooks per drop line.
- Distance between clusters is about 40cm. Snood length is about 50cm.
- Distance between the bottom clusters to concrete weight is about 1m.

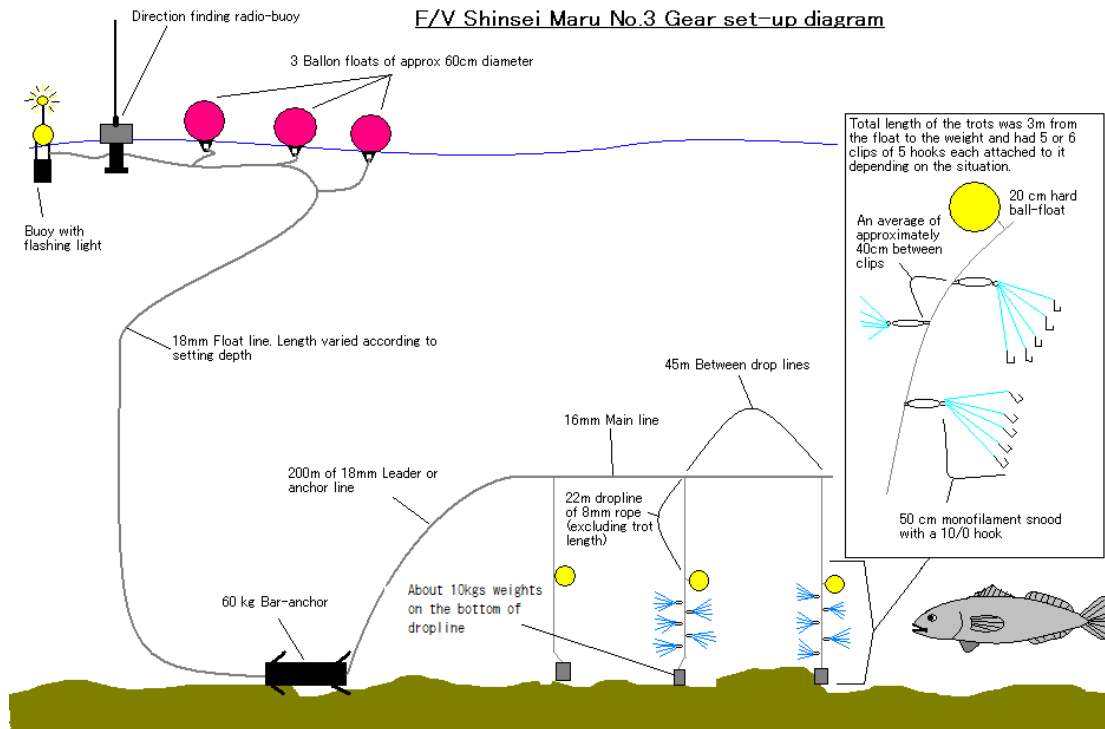
**Expected behaviour and feature of fishing gear**

- Trot line normally sinks vertically since the weight is attached on the bottom of each drop line.
- The line is hauled vertically by using hydraulic driven line hauler.
- Only both end of anchors and concrete weights are on the seabed constantly.
- Bottom section of drop lines, hooks and snoods could be on the seabed occasionally.

Taking above into consideration, the trot line would have much less impact against VME in comparison with other fishing method such as Auto-line and Spanish line since the most part of main lines and snoods with hooks are constantly on the seabed with these methods.

**4. REPORTS**

The report of the Exploratory fishing (2017) will be submitted to the Scientific Committee in 2017 and details of the exploratory fishing activities will be presented including the sea bed maps created by the information collected.



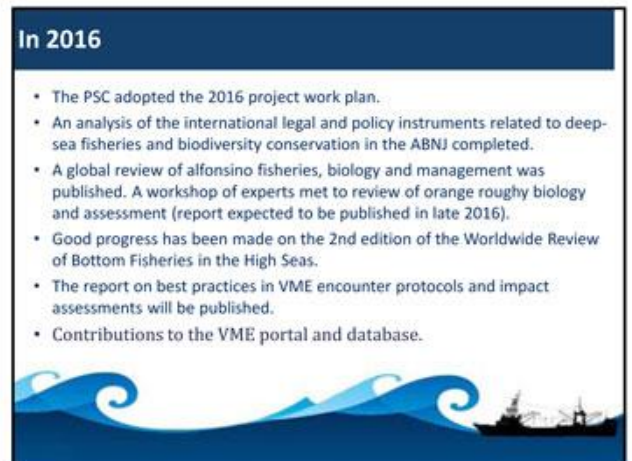
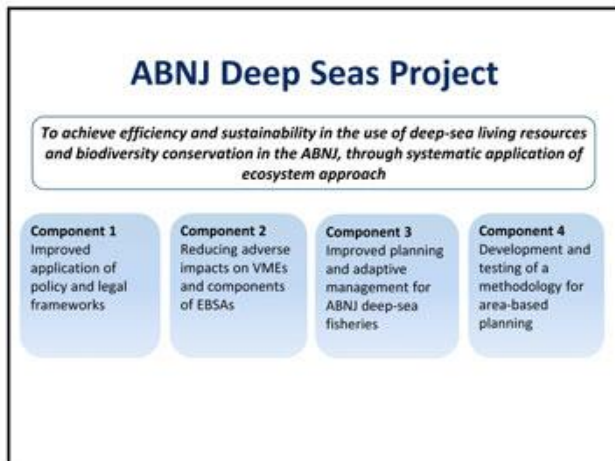
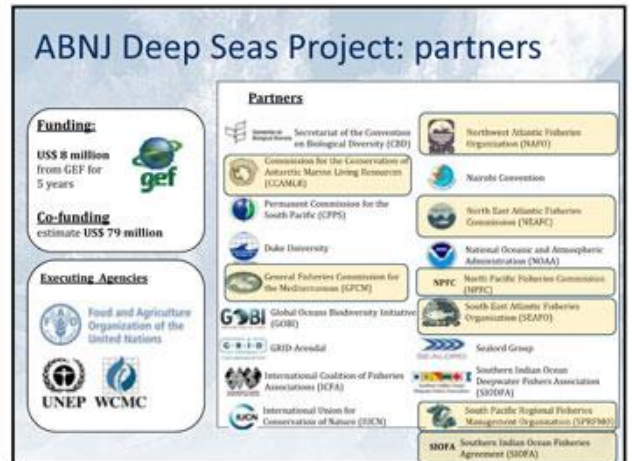
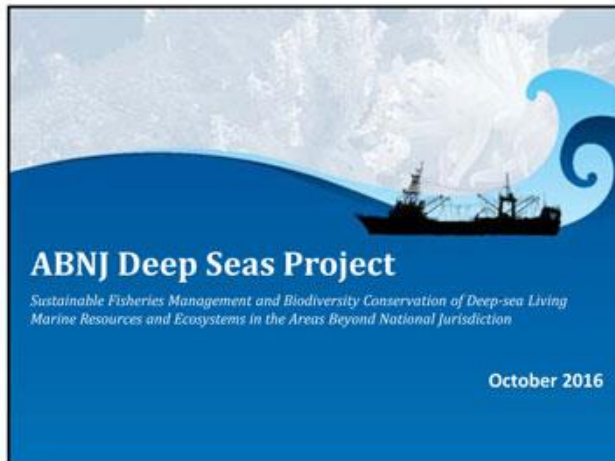
**Fig.1 Fishing gear configuration (trot line)**

## 5. VESSEL INFORMATION

(1)	Name of fishing vessel	Shinsei Maru No.3
	Previous names (if known)	Same as above
	Registration number	128862
	IMO number (if issued)	8520094
	External markings	Vessel marked with name and international radio call sign. White hull and white superstructure
	Port of registry	Yaizu – Japan
(2)	Previous flag (if any)	N/A
(3)	International Radio Call Sign	JAAL
(4)	Name of vessel's owner(s)	TAIYO A&F CO.,LTD.
	Address of vessel owner(s)	4-5,TOYOMI-CHO,CHUO-KU,TOKYO,JAPAN
	Beneficial owner(s) if known	Same as above
(5)	Name of licence owner	Same as the owner
	Address of licence owner (operator)	
(6)	Type of vessel	Longline fishing vessel
(7)	Where was vessel built	Shimizu, Shizuoka, Japan
	When was vessel built	1985
(8)	Vessel length overall LOA (m)	47.2
(9)	Details of the implementation of the tamper-proof requirements of the VMS device installed	The vessel is fitted with MAR-GE Argos VMS system. This is a sealed unit which has own GPS inside to ensure the independence from other acoustic devices and protected with official seals that indicate whether the unit has been accessed or tampered.
(10)	Name of operator	Same as the owner
	Address of operator	Same as the owner
(11)	Names and nationality of master and, where relevant, of fishing master	Master: Fujimori Kojima, Japanese Fishing master : Masayuki Matsumura , Japanese
(12)	Type of fishing method(s)	Bottom longline
(13)	Vessel beam (m)	8.7
(14)	Vessel gross registered tonnage	735
(15)	Vessel communication types and numbers (INMARSAT A, B and C)	INMARSAT -FB : 773190498 INMARSAT –C : <a href="mailto:432521000@satmailc.com">432521000@satmailc.com</a>
(16)	Normal crew complement	33
(17)	Power of main engine(s) (kW)	735
(18)	Carrying capacity (tonne)	250M/T
	Number of fish holds	4 holds
	Capacity of all holds (m <sup>3</sup> )	502.4 m <sup>3</sup>
(19)	Any other information in respect of each licensed vessel they consider appropriate (e.g. ice classification) for the purposes of the implementation of the conservation measures adopted by the Commission.	N/A



**APPENDIX XIV – FAO ABNJ Project**



## Annex 10 \_ Compliance Report



### Report of the 9th Compliance Committee Meeting

Port Elizabeth, South Africa, 29-30 November 2016- 01 December 2016

#### 1. Opening of the meeting

The Chair, Mr. Domingos Azevedo, from Angola opened the meeting and welcomed Contracting Parties (CP's) to the 9th Compliance Committee meeting.

#### 2. Appointment of Rapporteur

Mr. Ndara from Namibia was appointed as rapporteur.

#### 3. Adoption of agenda and meeting arrangements

The agenda was adopted with one item added to the agenda namely, 'Follow up on Recommendations of the Review Panel Report 2016.'

#### 4. Introduction of Contracting Party Delegates

The Heads of Delegations introduced the respective delegation (Appendix 1).

#### 5. Introduction of observers

The Chair informed the meeting that the USA, ICCAT, NAFO, NAMMCO, NEAFC and CCAMLR, SIOFA and BCC are present as observers.

#### 6. Executive Secretary's Report on Compliance

The Compliance Review Report was presented by the Secretariat (Appendix 2) and the following points were noted:

South Africa has submitted two of the three Port Inspection Reports to the Secretariat subsequent to the circulation of the Annual Compliance Review 2016 document. These reports were also submitted in the CCAMLR format.

South Africa indicated that due to difficulties experienced with the revamping of their IT systems during 2016, the Port State Inspection Reports were submitted to the Secretariat via private email *albeit* late. South Africa however gave the meeting the assurance that these reports would be submitted timeously moving forward and apologized for the delay in submission.

The Secretariat confirmed that there was consistency in the catches reflected in the Port State Inspection Reports as submitted by South Africa and that it was submitted in the CCAMLR format. Only two Port State Inspection Reports were received by the Secretariat instead of three. South Africa further emphasized the need for training in the area of Port State Inspection Reports and related compliance matters. RSA committed to send the reports in the correct format on 5<sup>th</sup> December 2016 to the Secretariat.

The meeting highlighted the importance to ensure that information is timeously submitted by Contracting Parties to the Secretariat thereby conforming to prescribed conservation measures.

The meeting noted that Japan used and submitted incorrect Scientific Observer Forms and

that catch information for each set was not included.

Japan explained that the submission of incorrect Scientific Observer Reports is regretted as it was erroneously submitted in the CCAMLR format. Japan mentioned that the error has already been rectified and the reports were submitted in the correct format. The Secretariat confirmed the submission of the reports. Japan further undertook to see to it that this error will not re-occur in the future.

#### **7. Annual Review of the "SYSTEM"**

The European Union presented proposed amendments to the SEAFO System (Appendix 3). The proposal was forwarded to the Commission for further discussions.

#### **8. Performance Review 2016 Recommendations**

##### **Recommendation 15: Create and implement follow up mechanisms on Port State infringements.**

The EU has presented a proposal to amend the System to incorporate follow up mechanisms on Port State infringements. The proposal was forwarded to the Commission for further discussions.

##### **Recommendation 16: The consideration by SEAFO to implement a comprehensive observer programme with compliance purposes**

It was agreed that this recommendation is premature at this stage and consideration might be given in the future.

##### **Recommendation 17: Evaluate the opportunity to integrate in the System measures to permit access by observers with compliance purposes from other CP's to carry out functions as agreed by the Commission.**

It was agreed that this recommendation is premature at this stage and consideration might be given in the future.

##### **Recommendation 18: Country by Country Compliance Review**

The EU committed to submit a proposal for Country by Country Compliance Review Process for the next annual meeting.

##### **Recommendation 19: Guidance and illustrated description of fishing methods and gears in SEAFO.**

No consensus was reached and the recommendation was not adopted.

##### **Recommendation 20: Development of more detailed procedures and requirements for follow up on detected infringements through the application of the System.**

The EU has presented a proposal to amend the System to incorporate follow up mechanisms on Port State infringements. The proposal was forwarded to the Commission for further discussions. South Africa stated that they supported this recommendation and also put it on record that all associated costs to training related to this proposal should be borne by SEAFO. The Secretariat then explained to the meeting the processes involved in requesting funding for training purposes.

##### **Recommendation 21: Observer Program with compliance purposes.**

It was agreed that this recommendation is premature at this stage and consideration might be given in the future.

##### **Recommendation 22: Consideration to recognize IUU Vessel lists of all relevant RFMO'S.**

It was agreed to include the SIOFA IUU vessel list to that of SEAFO IUU vessel list.

##### **Recommendation 23: The Secretariat should maintain linkages and contacts with other RFMO`s in order to build relationships between compliance staff.**

The Compliance Committee agreed to implement this recommendation immediately.

#### **9. Consideration of the provisional SEAFO IUU Vessel List cf. SEAFO ``SYSTEM``**

The following changes were incorporated to the SEAFO IUU vessel list;

- a) Viking- was removed

b) Antony, Andrey Dolgov and; Northern Warrior were added  
The provisional list is forwarded to the Commission for approval (Annex 3).

#### **10. Any other Matters**

The meeting agreed that the numbering in the System appeared to be confusing and should be made more reader friendly. This matter is deferred to next year for further discussions. The Secretariat was tasked with the revision of the compendium of existing enforcement measures which shall be posted on the SEAFO website in PDF format. The meeting also agreed that SEAFO should reduce the use of paper by providing more electronic working documents to CP`s.

South Africa identified a need to enhance compliance levels and therefore request that training be provided by SEAFO, costs which is to be borne by SEAFO. It is estimated that training costs would be approximately 30,000 ZAR. South Africa therefore request that these funds be provided for training similar to that provided to Scientific Committee by SEAFO.

#### **11. Election of Chair and Vice-Chairperson**

The term of the current Chair and Vice-Chairperson came to an end and in terms of the rotational rule, the EU and Japan will take over the Chair and Vice-Chairperson positions respectively. Nominees from the EU and Japan is to be confirmed.

#### **12. Adoption of the Compliance Committee Report**

The meeting reviewed and adopted the Compliance report to be presented by the Chair to the Commission.

#### **13. Venue and date of the next meeting**

The next Compliance Committee meeting is scheduled from 27 November-1 December 2017.

#### **14. Closure of the meeting**

The Chair closed the meeting at around 10h45 on 01 December 2016 and adjourned the meeting in good faith.

## Appendix 1

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**Appendix 2**  
**Compliance Report**



**Annual Compliance Review 2016**

Prepared by the  
SEAFO Secretariat (George Campanis)

## Introduction

The SEAFO compliance review is performed annually and covers the period from November 2015 to November 2016. The report assesses the performance of Contracting Parties in complying with SEAFO Conservation Measures<sup>1</sup> and reporting obligations contained in the SEAFO *System of Observation, Inspection, Compliance and Enforcement* (“SEAFO System”).

The annual SEAFO compliance review considers the timeliness, reliability and completeness of all data submitted to the Secretariat. Mindful of the Precautionary, and Ecosystem Approaches, and the general need for verifiable and complete data, SEAFO formally (SEAFO Convention, Article 13 - Contracting Party Obligations) obligates Contracting Parties to submit reliable and accurate data to the Secretariat. In addition to ensuring compliance, the data are used by SEAFO scientists and managers to develop conservation measures and perform scientific research.

The data sources used for the compliance review include all fishery-dependent data and information submitted to the Secretariat, namely: scientific observer forms, logbook forms, port inspection reports, vessel monitoring system (VMS) positions, entry (COE) and exit (COX) reports, 5-Day Catch reports, and quarterly catch reports.

### A. Effort

For the period 2007-2012, the total number of vessels fishing in the SEAFO CA remained stable, albeit relatively low (Figure 1). However, since 2011 a decreasing trend continues to be seen, with a decline from five vessels fishing in 2011 to a single vessel fishing in 2016. The total number of CPs (non-CPs and CPs) fishing has likewise remained relatively low and has decreased year-over-year since 2011 (Figure 2).

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<sup>1</sup> SEAFO Conservation Measures, <http://www.seafo.org/Management/Conservation-Measures>.

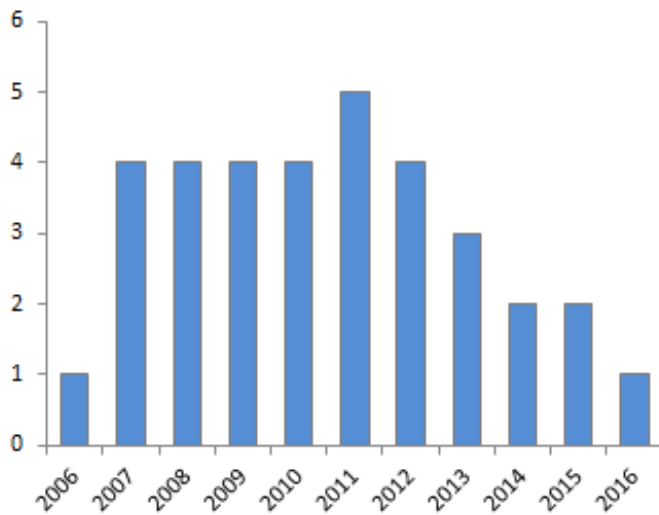


Figure 1. Number of fishing vessels per year in the CA

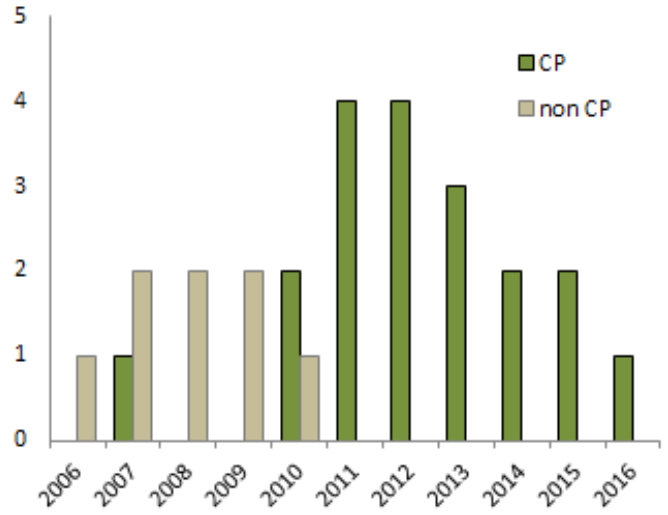


Figure 2. Number of fishing non-CPs and CPs per year in the CA

In the SEAFO Convention Area, the total number of fishing days have decreased year-over-year from a high of 202 days in 2011 to 122 days in 2016 (Figure 3). This decline can be explained by the decrease in the number of vessels fishing in the SEAFO CA since 2011.

It is noted that fishing days increased by 22 days in 2016, albeit that there was one fewer vessel fishing; however, this increase in effort did not translate into higher catches of Patagonian toothfish, as would be expected given that there was more effort in 2016 (25 more longline sets were deployed in 2016)

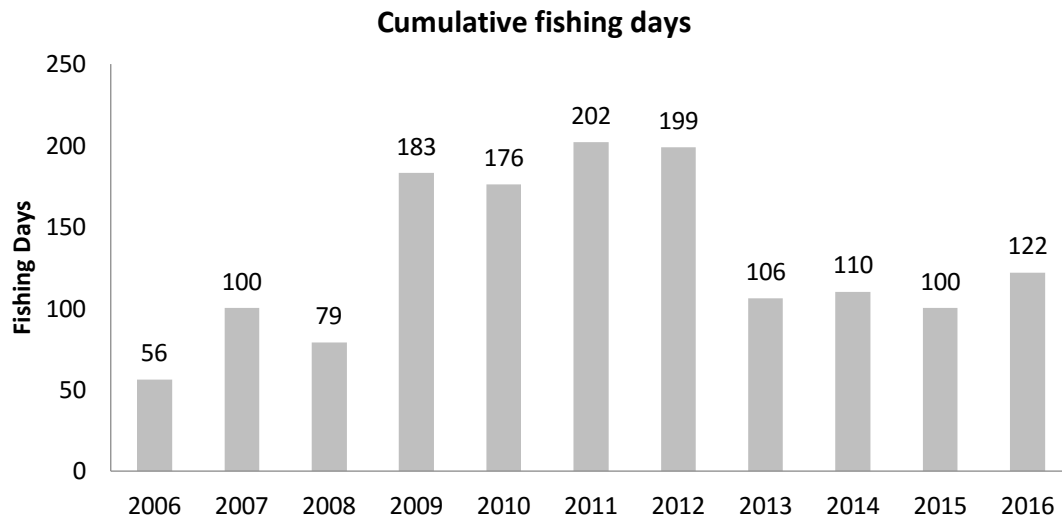


Figure 3. Total fishing days reported by onboard scientific observers (2006 - Nov 2016). Aggregated by vessel.

## B. Catch

The total catches (landings) of directed species<sup>2</sup> in the SEAFO CA have significantly decreased from 1160t in 2010 to 61t in 2016. This decrease constitutes a decline in catch of 95% since 2010. It is noteworthy that the total observed catch in 2010 is mostly as a result of a proportionately large catch of pelagic armourhead (688t) in 2010. However, a steadily decreasing trend in annual catches, since 2010, is clearly evidenced. Notably, 2016, is the first year in which deep-sea red crab was not fished since 2006.

<sup>2</sup>Based on scientific observer forms “target species” identification.

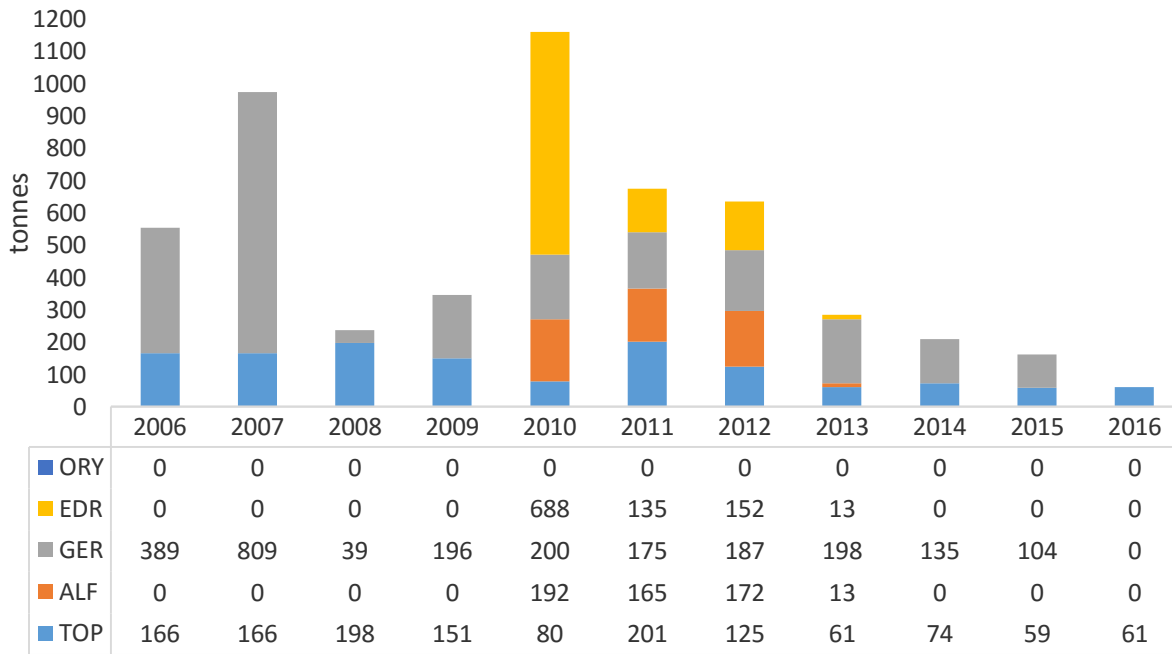


Figure 4. Aggregated catch (landings) of TAC Species in tonnes from 2003 to 2016 (Nov). Species identified includes: alfonsino [ALF], deep-sea red crab [GER], orange roughy [ORY], Patagonian toothfish [TOP], pelagic armourhead [EDR]

### Total Allowable Catches

When comparing annual catches (landings) and the TACs set by the Commission over the past seven years (2010-2016), it becomes apparent that commercial fishing operations in the SEAFO CA are consistently well below the TAC thresholds set by the Commission, and that resources are not being exploited to their potential as determined by the TAC thresholds.

For the past several years, annual catches of Patagonian toothfish have typically been well below that of the allocated TAC (Figure 5a), alfonsino has not been fished viably since 2012 (Figure 5b), and deep-sea red crab has shown a steep decreasing trend, culminating with a zero catch in 2016 (Figure 5c; Figure 5d).

Orange roughy is effectively under a moratorium with a limited TAC of 50t in the CA, and a nominal bycatch amount of 4t in Div. B1 (Figure 5e). Moreover there have been no recorded landings of orange roughy since 2005. In 2014,

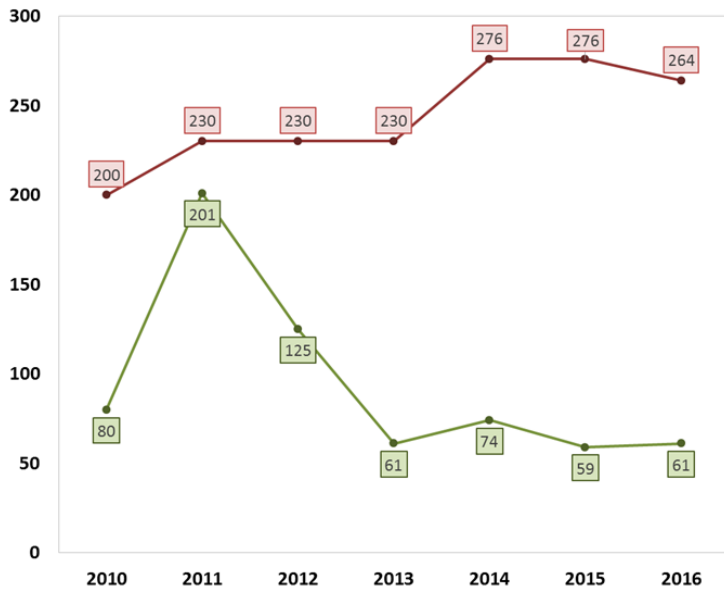


Figure 5a. Catches (t) of Patagonian toothfish

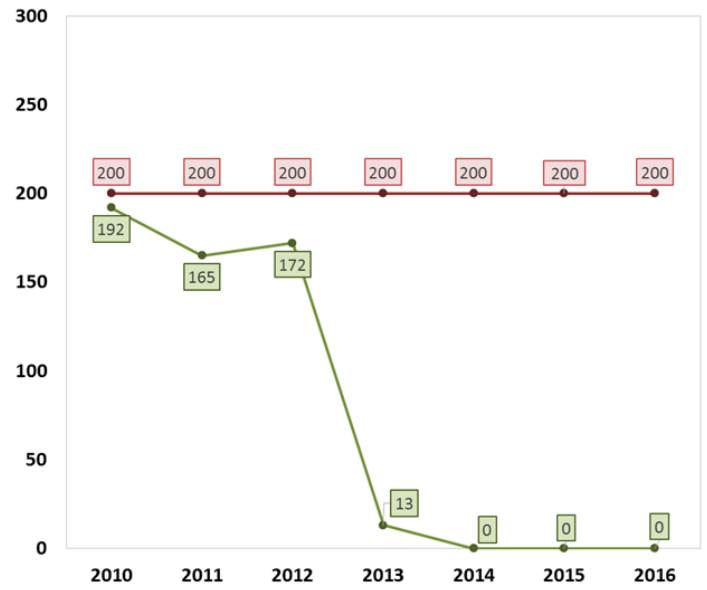


Figure 5b. Catches (t) of alfonsino \*Maximum 136t in Div. B1 (2015)

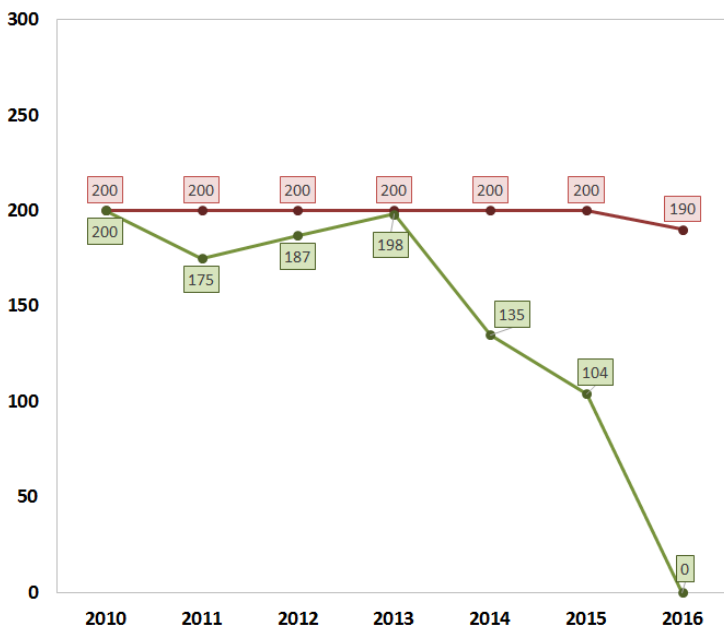


Figure 5c. Catches (t) of deep-sea red crab (Div. B1)

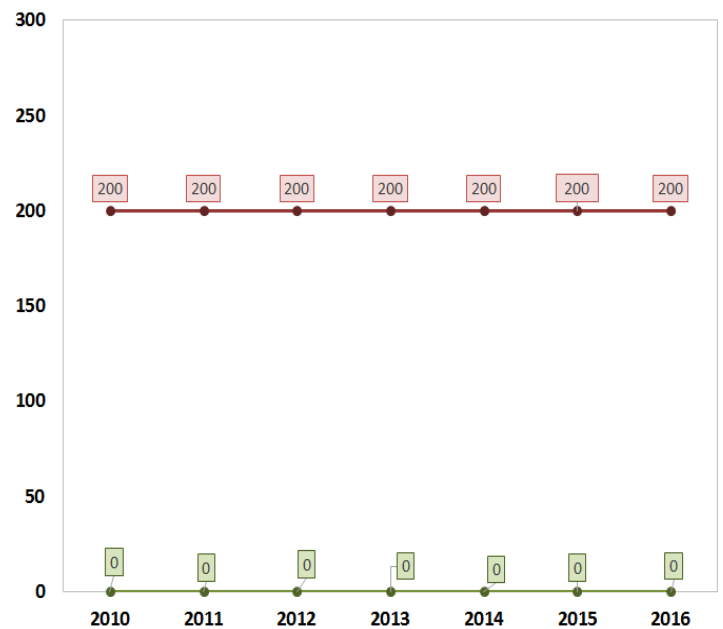


Figure 5d. Catches (t) of deep-sea red crab (CA excluding Div. B1)

the Commission formally agreed upon a TAC for pelagic armourhead for the first time; however, no catches of pelagic armourhead have occurred since 2013 (Figure 5f).

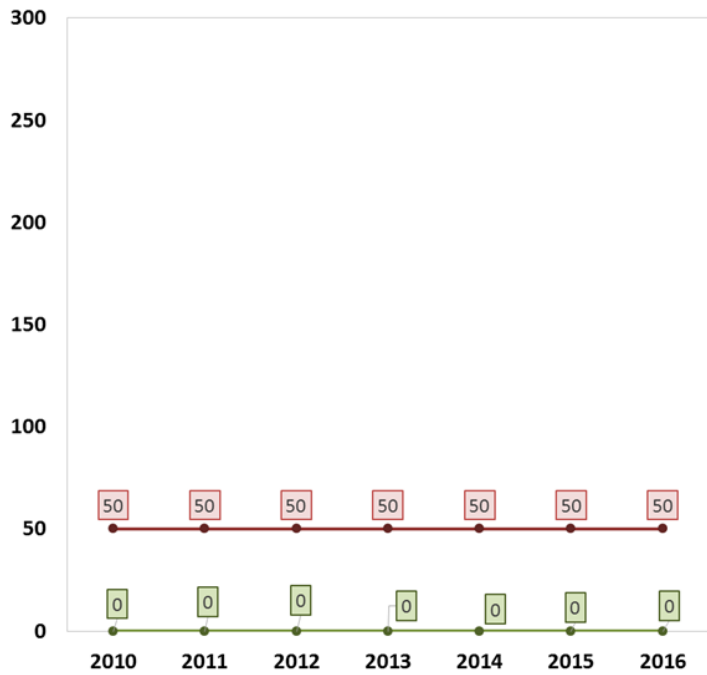


Figure 5e. Catches (t) of orange roughy (All CA, [CA excluding B1: 50t; B1: 0t, and 4t bycatch])

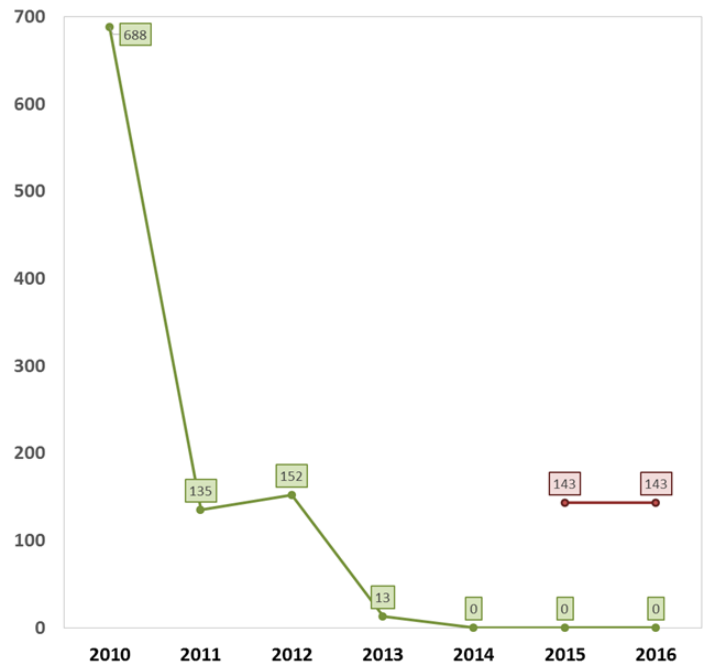


Figure 5f. Catches (t) of pelagic armourhead

### Catch Reporting Comparison

In general, catch reporting, in 2016 by Japan, were consistent amongst various reporting instruments (Table 1). However, Port Inspection Reports were not provided for the Japanese vessel which fished for Patagonian toothfish in Sub-area D and landed its catch in Cape Town, South Africa. The landings could therefore not be verified using Port Inspection Reports.

Unfortunately, the scientific observer form used during the second trip, undertaken by the Japanese vessel, did not include catch information. However, once the logbook data were included to replace the missing scientific observer data, the observer catch reports were consistent with the other catch reporting modes.

	Target Species	5-Day Catch Reports	Scientific Observer	Port Inspection	Quarterly Reports	Logbook
Japan	Patagonian toothfish	60,726	28,490 <sup>#</sup>	-	60,724	60,724

Table 1. Comparison of reported catches (kg) - 2016.

<sup>#</sup> missing observer catch data. When replacing missing observer data with logbook data the total catch is 60,789 kg

## Compliance by Contracting Parties

### Vessel Monitoring System (VMS)

Japan provided VMS data to the Secretariat in a timely and complete manner. All VMS data received were structured in accordance with specifications described in SEAFO System Annex III.

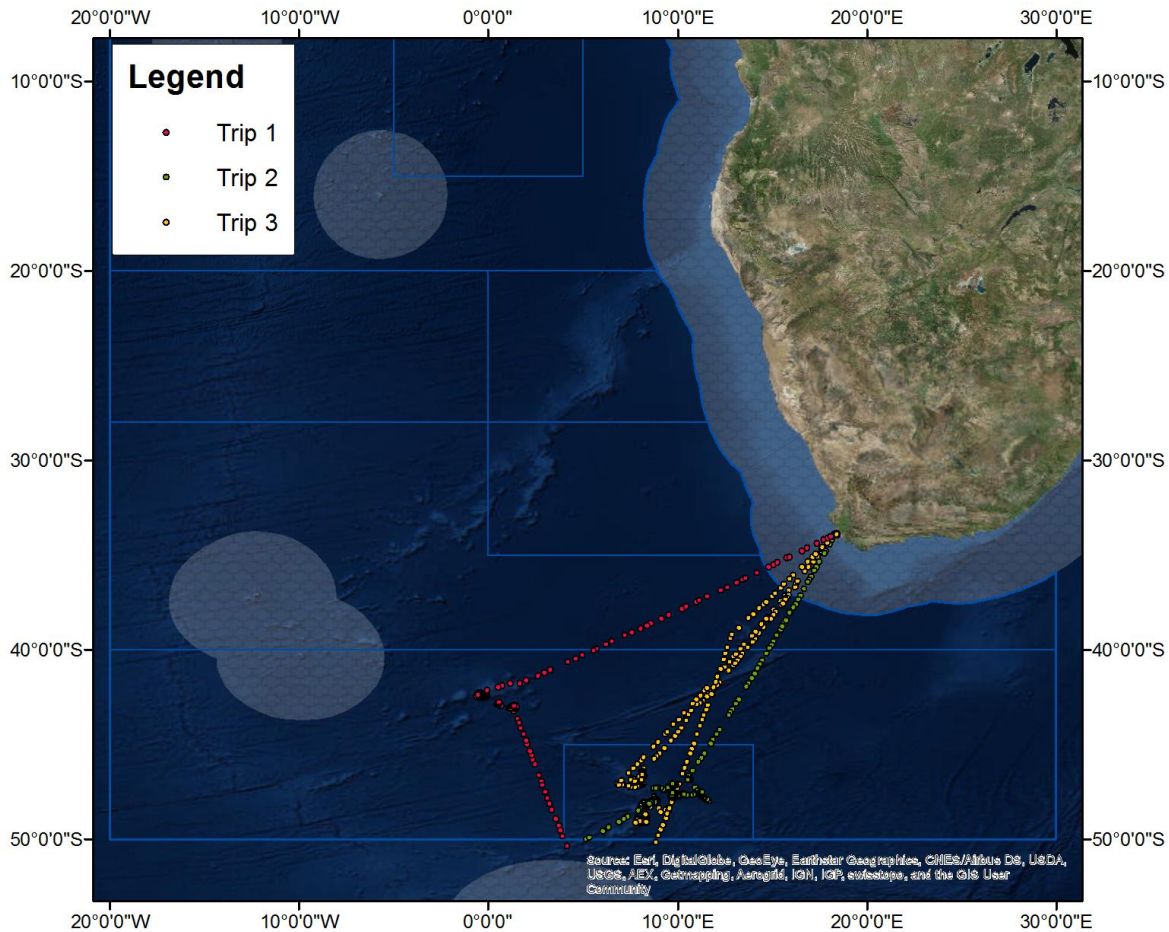


Figure 6. Unfiltered VMS positions, color coded by trip.

### Logbook Reports

Japan were compliant with the requirement to submit Logbook Reports as described by Article 10.2b of the SEAFO System. The requirement to submit of logbook data was a requirement introduced in 2016.

### Catch on Entry (COE)/ Catch on Exit (COX) Reports

Japan were compliant with the requirement to submit Catch on Entry and Catch on Exit reports, as described by Article 11 and Annex II.A of the SEAFO System.

### 5-Day Catch (CAT) Reports

Japan submitted 5-Day Catch reports according to the 5-day interval, and specifications described by Article 11.b and Annex II.A of the SEAFO System.



### **Quarterly Catch Reports**

Japan were compliant with the requirement to submit Quarterly Catch Reports as described by Article 12.1 of the SEAFO System. Japan included bycatch species in kilograms, as per adoption at the 2015 Annual Meeting.

### **Scientific Observer Reports**

The scientific observer data submitted by Japan for their respective fishing operations was complete and on-time for two of the three trips undertaken. Unfortunately, due to the scientific observer using an incorrect observer form, catch information for each set was not included. The relevant trip occurred 22 March –21 April 2016. Fortunately, the Secretariat did receive the logbook data for the trip, and was therefore able to replace the missing catch data.

### **Port State Control - Port Inspection/ Advanced Request for Port Entry**

The Secretariat has not received Port Inspection Reports from South Africa for the three trips undertaken by Japan in sub-area D. It is assumed that the vessel offloaded its catches in Cape Town, South Africa, as the VMS data received by the Secretariat (Figure 6) confirms the vessels' departure and arrival in Cape Town for all three fishing trips.

### **Closed Areas and Existing Fishing Areas**

The scientific observer data (Figure 7a), and filtered VMS data (Figure 7b; speed  $\leq 5$ kn), confirms that all fishing activities in 2016 occurred outside SEAFOs Closed Areas. Moreover, all fishing were conducted within SEAFOs Existing Fishing Areas (166 sets), or within the approved Exploratory Fishing Areas (10 sets). The Japanese vessel, Shinsei Maru No 3, engaged in exploratory fishing on the Discovery Seamount during 2016 (Figure 7a/b – Exploratory Fishing Area represented by purple  $1^{\circ} \times 1^{\circ}$  squares). The exploratory fishing protocol was followed, with the VME taxa thresholds not being reached during regular commercial or research fishing operations.

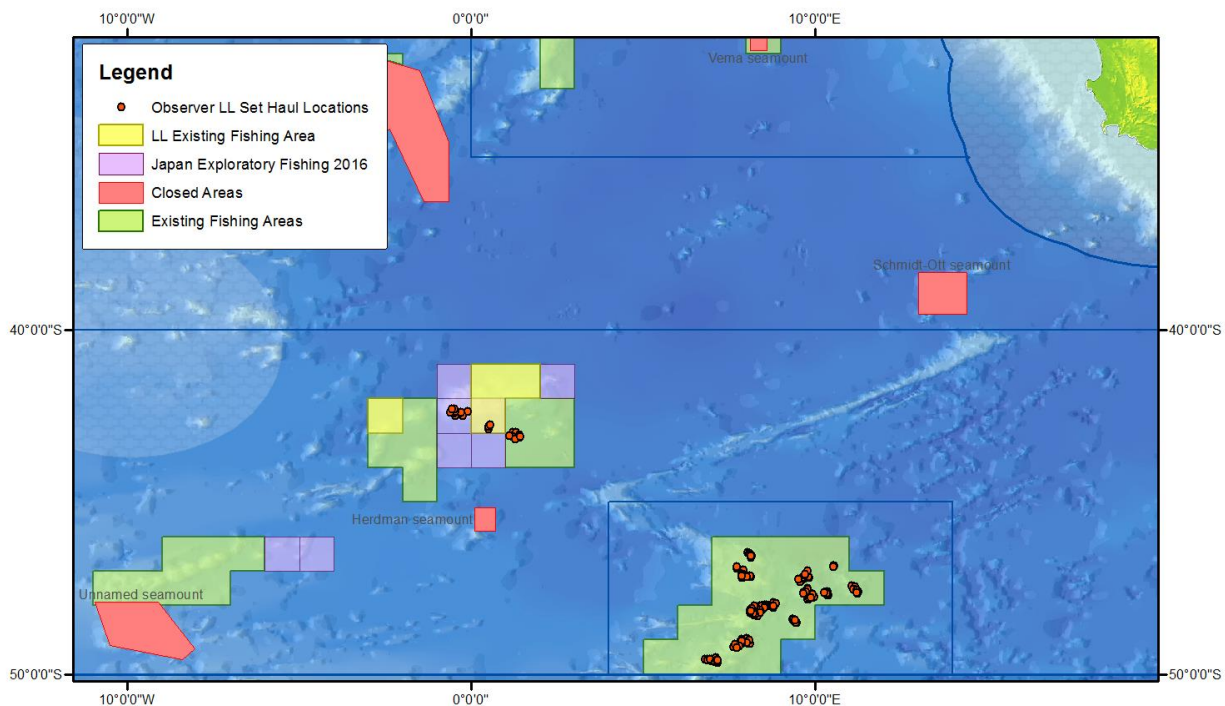


Figure 7a. Longline fishing end positions in Sub-area D, for the period Nov 2015 – Nov 2016. Scientific observer data.

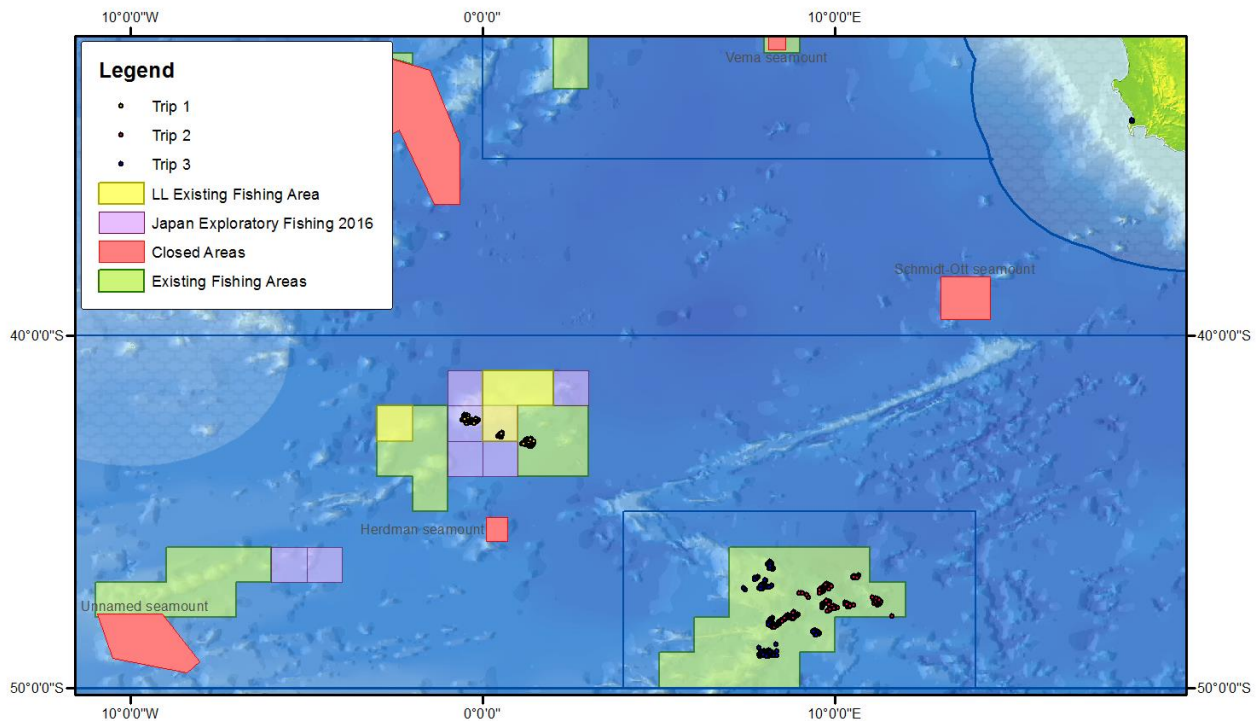


Figure 7b. VMS positions filtered by speed ( $\leq 5$ kn), for the period Nov 2015 – Nov 2016.

### **Incidental Bycatch: Sea Turtles; Sharks and Seabirds**

#### **a. Sea Turtle**

No bycatch of sea turtle were reported to the Secretariat.

#### **b. Sharks**

No bycatch of sharks were reported to the Secretariat.

#### **c. Seabirds**

During longline fishing operations in SEAFO sub-area D, in 2016, two seabirds were reported to have been caught as incidental bycatch: a Wandering Albatross (*Diomedea exulans*), and a Great Shearwater (*Puffinus gravis*).

### **Lost Gear**

No lost gear was reported for fisheries occurring in 2016.

### **IUU**

Contracting Parties did not report any sightings of IUU vessels during 2016. The Secretariat has submitted a draft and provisional IUU Vessel list to Contracting Parties for approval (Annex III).

### **Authorized Vessel List**

Contracting Parties are required to provide the Secretariat with a list of vessels authorized to fish in the SEAFO CA on annual bases prior to December 1st of every year (SEAFO System Art. 4.1). The current authorized SEAFO vessel list is appended in Annex IV.

**VME Indicator Species By-catch / Move-away Rule**

Although VME-indicator species were caught during 2016, the longline fishing conducted by Japan (Figure 8) did not exceed the thresholds of coral and sponge bycatch, and therefore the move-away rules defined in CM 30-15, Art. 8 was not triggered (Table 2).

Bycatch of hard corals (Scleractinia) and Gorgonians (Gorgoniidae) comprise of ~90% of the bycatch caught in 2016 (Table 2), and the average bycatch per set, with VME species present, was 0.53 kg (Table 3). The bycatch amounts are well below the current thresholds for longlines defined in CM 31-15 Annex 6 as: *“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 or 1000 hooks, whichever is the shorter, in both existing and new fishing areas”*.

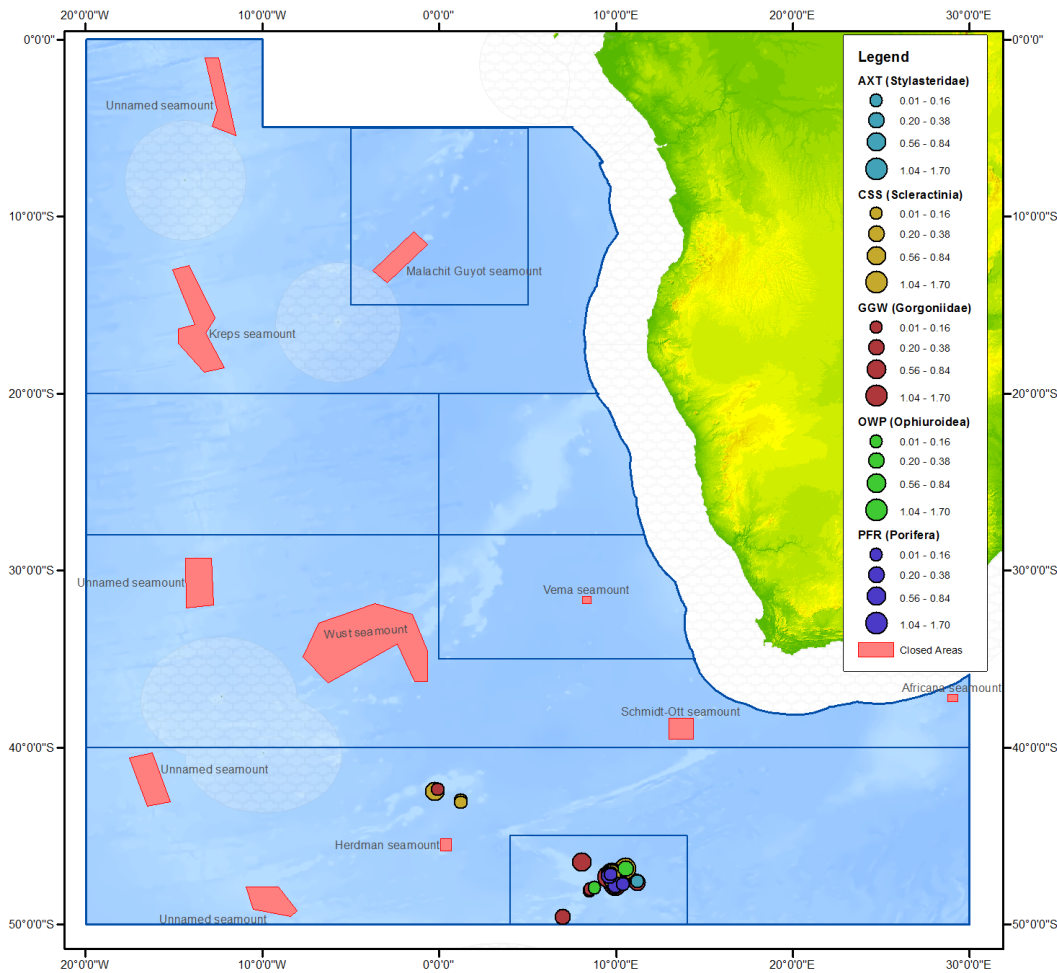


Figure 8. Spatial distribution of VME indicator species as recorded by the Japanese longline fishery within Sub-area D.



ASFIS Code	Common Name	Total Bycatch
AXT	Hydrocorals	0.12
CSS	Hard corals, madrepores nei	4.56
GGW	Gorgonians	10.35
OWP	Basket and brittle stars	0.6
PFR	Sponges	0.84

Table 2. Reported aggregated catch of VME Indicator species in 2016. Data Source: SEAFO Scientific Observer data.

SEAFO Area	Fishing Type*	Target Species	Sets	Sets - VMEs Present	Prop. Sets - VMEs Present	Min. Bycatch (Kg)	Avg. Bycatch (Kg)	Max. Bycatch (Kg)
Sub-area D	Commercial	Patagonian toothfish	166	30	18.07%	0.02	0.53	2.26
Exploratory Fishing Area (D0)	Research	Patagonian toothfish	10	2	20.00%	0.01	0.30	0.58

Table 3. Reported aggregated catch of VME Indicator species by set for 2016. Data Source: SEAFO Scientific Observer data.

## Annex I – Compliance Table

Management Measure	SEAFO Article / CM	Reporting Obligation	Timeliness	Complete	Notes
<b>2016 - FISHING NATIONS</b>					
 JAPAN					
CONTROL	SEAFO System (Art. 4.1, 4.2)	Vessel List	✓	✓	
MONITORING	SEAFO System (Art 10.2)	Logbook Reports	✓	✓	
	SEAFO System (Art 11.a)	Entry Report	✓	✓	
	SEAFO System (Art 11.b) CM 23/12 (Para. 2)	5-Day Catch	✓	✓	
	SEAFO System (Art 11.c)	Exit Report	✓	✓	
	SEAFO System (Art 12.1)	Quarterly Catch	✓	✓	
	SEAFO System (Art. 13.1-13.3)	VMS Positions	✓	✓	
OBSERVER PROGRAMME	SEAFO System (Art. 16.1, 16.2) CM 23/12 (Para. 4)	Observer Reports	✓	✗	Scientific observer data for the trip undertaken 22 March –21 April 2016 did not contain catch per set.
<b>2016 – INSPECTING NATIONS</b>					
 REPUBLIC OF SOUTH AFRICA					
PORT STATE CONTROL	SEAFO System (Art. 24.6)	Port Inspection	✗	✗	Port Inspection Reports for Shinsei Maru No3 were not provided to the Secretariat. It is understood that the vessel offloaded their catches in Cape Town on three separate occasions.

## Annex II – CP Reporting Requirements and Obligations

Management Measure	Article	Report	Report To	Reporting Date	Report Frequency	Reporting Method
GENERAL PROVISIONS	SEAFO System (Art. 3.2)	CP Contact Points	Secretariat - ES	Prior to 15 March 2013	Once - then as needed	Electronically-Email
CONTROL	SEAFO System (Art. 4.1, 4.2)	Vessel List	Secretariat - ES	1st December	Annually	Electronically-Email
	SEAFO System (Art. 4.7)	Sited Illegal Vessel	Secretariat - ES	Without delay	Upon Occurrence	Not specified
	SEAFO System (Art 8.f)	Lost Gear	Secretariat - ES	Without delay	Upon Occurrence	Not specified
MONITORING	SEAFO System (Art 10.2)	Logbook	Secretariat - ES	Within 30 days of leaving CA	Upon Occurrence	Not specified
	SEAFO System (Art 11.a)	Entry Report (COE)	Secretariat - ES	6 hours in advance of entry	Once	Electronically-Email/HTTPS
	SEAFO System (Art 11.b) CM 31/15 (Para. 2)	5-Day Catch	Secretariat - ES	upon entry into CA	Every 5 days	Electronically-Email/HTTPS
	SEAFO System (Art 11.c)	Exit Report (COX)	Secretariat - ES	6 hours in advance of exit	Once	Electronically-Email/HTTPS
	SEAFO System (Art 12.1)	Quarterly Aggregated Catch	Secretariat - ES	30 days after quarter	Quarterly	Electronically-Email
	SEAFO System (Art. 13.1-13.3)	VMS - Positions	Secretariat - ES	No later than 24 hours after Receipt	Every 2 hours	Electronically-Email/HTTPS
	SEAFO System (Art. 14.4)	Transshipments	Secretariat - ES	Not specified	Not specified	Not specified
OBSERVER PROGRAMME/ TACs & RELATED CONDITIONS	SEAFO System (Art. 18.1, 18.2) CM 31/15 (Para. 2)	Observer Reports/CPUE Report	Secretariat - ES	Within 30 days of leaving CA Three months prior to the SC meeting	Every Fishing Trip Annually	Electronically-Email
PORT STATE CONTROL	SEAFO System (Art. 20.1)	Ports of Entry	Secretariat - ES	Not specified	Not specified	Not specified
	SEAFO System (Art. 21, Annex VI)	Advance request for port entry	Port Authority CP/Secretariat - ES	48 hours prior to entering port/31 days prior to changes becoming effective	Upon Occurrence	Not specified
	SEAFO System (Art. 22.3 / Art. 23.3)	Denial of entry/use of port	Secretariat - ES	Not specified	Upon Occurrence	Not specified
	SEAFO System (Art. 24.6)	Inspection Information	Secretariat - ES	Not specified	Not specified	Not specified
	SEAFO System (Art. 25.4)	Role of flag State	Secretariat - ES	Not specified	Not specified	Not specified
	SEAFO System (Art. 27.2)	Sightings of non-contracting party vessels	Secretariat - ES	Without delay	Upon Occurrence	Not specified

MEASURES TO PROMOTE COMPLIANCE	SEAFO System (Art. 28.1)	Listing IUU vessels	Secretariat - ES	120 days prior to Annual Meeting	Annually	Not specified
	SEAFO System (Art. 28.6)	Comments on draft IUU vessels list	Secretariat - ES	30 days prior to Annual Meeting	Annually	Not specified
	SEAFO System (Art. 28.19)	Objections on SEAFOs IUU vessels list	Secretariat - ES	30 days after composite IUU list is circulated	Not specified- Assumed to be annually	Not specified
SHARKS CATCHES	CM 14/09 (Para. 1)	Catches of Sharks	Secretariat - ES	Not specified	Annually	Not specified
REDUCE SEA TURTLE MORTALITY	CM 04/06 (Para. 5)	Catches of Sea Turtles	Secretariat - ES	Not specified	Annually	Not specified
TACS & RELATED CONDITIONS	CM 31/15 (Para. 2)	CPUE Report	Secretariat - ES	Three months prior to the SC meeting	Annually	Not specified
NEW FISHING AREAS	CM 30/15 (Art. 7)	Impact Assessment	SC / Secretariat - ES	Not specified	Not specified	Not specified
	CM 30/15 ( Art. 7)	Results of Impact Assessment	Commission	Not specified	Not specified	Not specified
	CM 30/15 ( Art. 8)	VME Encounters	Secretariat - ES	Not specified	Every encounter	Not specified
INCIDENTAL BY-CATCH OF SEABIRDS	CM 25/12 (Para. 1)	Catches of Seabirds	Secretariat - ES	Not specified	Not specified	Not specified

**Annex III – SEAFO Provisional 2017 IUU List**

<b>IMO Number</b>	<b>Vessel Name</b>	<b>Previous Names</b>	<b>Current flag and previous flag in brackets</b>	<b>Current IRCS</b>	<b>Summary of activities</b>	<b>Operator and previous operator in brackets</b>	<b>IUU-listing Organizations</b>	<b>IUU Listing Dates</b>
<b>7306570</b>	Alboran II	1. White Enterprise 2. Enxembre 3. Atalaya 4. Reda IV 5. Atalaya del Sur	Unknown (1. Panama (2. St. Kitts & Nevis)	Unknown	Gibraltar (31 March 2009)		NEAFC NAFO	2009
<b>7424891</b>	Aldabra			5VAA2	- Fishing inside Division 58.4.4b (10 Nov 2006)	- Cecibell Securities - Farway Shipping	CCAMLR	2007
<b>7036345</b>	Amorinn			5VAN9	Inside Division 58.4.2 (23 Jan 2004)	- InfitcoLtd (Ocean Star Maritime CO)	CCAMLR	2003
<b>9037537</b>	Baroon		Tanzania, United Republic of	5IM376	Sighted 57 (14 Feb 2014)	- Punta Brava Fishing SA - Vero Shipping Corporation	CCAMLR	2007
<b>6622642</b>	<b>Challenge</b>			<b>HO5381</b>	<b>Inside Division 58.4.3b Feb 2008)</b>	<b>- Prion Ltd (- Vidal Armdores S.A. - Mar de Neptuno SA - Advantage Company SA - Argibay Perez.J.A)</b>	<b>CCAMLR</b>	<b>2006</b>
<b>8604668</b>	Eros Dos	Furabolos	Unknown (1. Panama 2. Seychelles)	Unknown	St. Eugenia de Ribeira, Spain (05 March 2009)		NAFO	2009
<b>7020126</b>	Good Hope		Nigeria	5NMU	- Resupplying IUU vessels Area 51 (09 Feb 2007)	- Sharks Investments AVV - Port Plus Ltd	CCAMLR	2007



<b>6714919/ 6719419</b>	Gorilero	Gran Sol	Unknown	Unknown	La Coruna, Spain (September 2007)		NEAFC NAFO	2007
<b>7322926</b>	Heavy Sea			3ENF8	Inside Division 57	- C&S Fisheries S.A. - Muner SA - Meteroros Shipping - Meteora Shipping Inc. - Barroso Fish S.A.	CCAMLR	2004
<b>7332218</b>	Iannis I	Unknown	Unknown (Panama)	HO3374	Indian Ocean		NEAFC NAFO	2007
<b>6803961</b>	Itziar II		Nigeria	5NTV3	Sighted 88.2 (16 Dec 2009)	- Monteco Shipping - Transglobe Investments Ltd - Capensis	CCAMLR	2003
<b>7905443</b>	<b>Koosha 4</b>		<b>Iran, Islamic Republic of</b>	<b>9BQK</b>	<b>Inside Division 58.4.1 (15 Feb 2011)</b>	<b>Pars Paya Seyd Industrial Fish</b>	<b>CCAMLR</b>	<b>2011</b>
<b>7322897</b>	Kunlun			3CAG	Sighting 57 (26 Feb 2015)	- Navalmar S.A. - Meteora Development Inc - Vidal Armadores S.A. - Rajan Corporation - Rep Line Ventures S.A. - Stanley Management Inc	CCAMLR	2003
<b>7388267</b>	Limpopo				Sighted 58.4.3b (25 Jan 2007)	- Grupo Oya Perez (Kang Brothers) - Lena Enterprises Ltd - Alos Company Ghana Ltd	CCAMLR	2003
<b>7325746</b>	Maine (Labiko)	1. Guinespa I 2. Maposa Noveno	Guinea Conakry	3XL2	NEAFC Regulatory Area (29 Oct 2007)		NEAFC NAFO	2007
<b>7385174</b>	Murtosa		Unknown (Togo)	Unknown		Aveiro, Portugal (since 2005)	NEAFC NAFO	2005

<b>5062479</b>	Perlon			5NTV21	Sighted 57 (20 Jul 2014)	- Vakin S.A. - Jose Lorenzo SL - Americagalaica S.A.	CCAMLR	2003
<b>660766 6</b>	Ray	<b>1. Killy</b> <b>2. Tropics</b> <b>3. Isla Graciosa</b> <b>4. Constan t</b>	Belize	V3RB2	<b>Fishing 58.4.3b (20 Jan 2009)</b> <b>Fishing inside Division A (2012)</b>	<b>- Arniston Fish -- Processors (Pty) Ltd</b> <b>- Vidal Armadores S.A.</b> <b>- Nalanza S.A.</b> <b>- Argibay Perez J.A.</b> <b>- Belfast Global S.A.</b>	<b>CCAML R</b> <b>SEAFO</b>	<b>2006 2012</b>
<b>681893 0</b>	Tchaw				Fishing 58.4.3b (14 Mar 2007)	- Arcosmar Fisheries Corporation - JMS Lopez - Premier Business - His-To Company Ltd - Jose Manuel Salgueiro	CCAMLR	2005
<b>732137 4</b>	Trinity	1. Yucutan Basin 2. Enxembre 3. Fonte Nova 4. Jawhara	Unknown	Unknow n	Tema Ghana (2011)		NEAFC NAFO	200413 w
<b>871339 2</b>	Viking		Nigeria		Sighted 57 (21 Mar 2014)	- Manuel Martinez - Cazenove International S.A. - Canela Shipping Ltd - Canela Shipping Limited - Trancoeiro Fishing S.A.	CCAMLR	2004
<b>931985 6</b>	Zemour 1	Songhua	Mauritani a	9LU2119	Hauling 58.4.1H (06 Jan 2015)	- Mabenal S.A. · Vidal Armadores S.A. · Omunkete Fishing Pty Ltd · Gongola Fishing JV (Pty) Ltd · Eastern Holdings	CCAMLR	2008
<b>904200 1</b>	Zemou r 2	Yonding	Mauritani a	3CAE	Fishing 58.4.1H (12 Jan 2015)	- Viarsa Fishing Company/Navalma r S.A. - Global Intercontinental	CCAMLR	2004

Services  
 - Rajan Corporation  
 - Redlines Ventures  
 SA

### Annex IV – SEAFO Authorized Vessel List (updated April 2016)

	Vessel Name	Flag State	Radio Call Sign	IMO	Gear	Length(m)	Gross Tonnage
1	Shinsei Maru No.3	Japan	JAAL	8520094	LL	47.2	495
2	Seiryō Maru No.1	Japan	JNNI	8203828	LL, Pot	37.06	221
3	Crab Queen 1	Republic of Namibia	V5XD	8909628	LL, Pot	49.61	619
4	JCS 1	Republic of Namibia	V5HL	7511541	-	44.71	770
5	Sunfish	Republic of Namibia	V5ZU	9060431	OTM	96.7	4407
6	Carapau 1	Republic of Namibia	V5NU	8843044	OTM	96.7	4407
7	Namibian Star	Republic of Namibia	V5NT	8721258	OTM	96.7	4407
8	Argos Marine	Republic of Namibia	V5OW	8113035	OTM	56.62	1093
9	Koryo Maru 11	Republic of South Africa	ZR7955	8603896	LL	10.4	336
10	Meridian No. 8	Republic of South Korea	DTBX5	9230646	LL, Pot	46.50	495
11	Poseidon	Republic of South Korea	DTAF3	7425039	OTM	35.58	161
12	Tronio	Spain	ECJF	9361603	LL	47.60	569.26
13	Viking Bay	Spain	EAWJ	9221516	LL	43.5	280
14	Faro De Burela	Spain	EALI	9344916	OTM	27.5	149
15	Adexe Primero	Spain	EACQ	8834823	Pot	47.92	749.58
16	Yanque	Spain	ECAP	9297993	LL	38.50	411.81

[NB. For EU vessels the tonnage is Oslo]

Appendix 3



**South East Atlantic Fisheries Organisation**

**SEAFO**

**SYSTEM OF OBSERVATION, INSPECTION,  
COMPLIANCE AND ENFORCEMENT  
(2016)**

THE SOUTH EAST ATLANTIC FISHERIES ORGANISATION AT ITS 10<sup>th</sup> ANNUAL MEETING IN 2013 ADOPTED IN ACCORDANCE WITH ARTICLE 16 OF THE CONVENTION, THE FOLLOWING RECOMMENDATION ON A SYSTEM OF CONTROL AND ENFORCEMENT

*In accordance with Article 16 of the Convention on observation inspection compliance and enforcement, the Commission recommends that the attached SYSTEM OF OBSERVATION, INSPECTION, COMPLIANCE AND ENFORCEMENT shall enter into force on 14th February 2017*

At the same time the following SEAFO Conservation and Control Measures:

- (a) "07/06 relating to Interim Measures to amend the interim Arrangement of the SEAFO Convention";
- (b) "08/06 Establish a List of Vessels Presumed to Have Carried out Illegal, Unreported and Unregulated (IUU) Fishing Activities";
- (c) "13/09 on an Interim Prohibition of Transshipment at SEA in the SEAFO Convention Area and to regulated Transshipment in Port";
- (d) "19/10 on Retrieval of Lost Fixed Gear";
- (e) "21/11 on port State control";
- (f) "System of Observation, Inspection, Compliance and Enforcement" as entered into force on 6 February 2013; and
- (g) "System of Observation, Inspection, Compliance and Enforcement" as entered into force on 12 February 2014, is repealed.
- (h) "System of Observation, Inspection, Compliance and Enforcement" as entered into force on 15 February 2016, is repealed.

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# CHAPTER I

## General provisions

### Article 1 – Scope

Unless otherwise stated, this System of Observation, Inspection, Compliance and Enforcement, hereafter designated as the System, shall apply to all fishing vessels and fishing research vessels operating or intending to operate in the Convention Area.

### Article 2 – Definitions

1. In addition to the definitions laid down in the Convention, for the purpose of this System the following definitions shall apply:
  - (a) “Convention” means the Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean;
  - (b) “Convention Area” means the waters of the Convention Area as defined in Article 4 of the Convention;
  - (c) “fishing related activities” means any operation in support of, or in preparation for fishing, including the landing, packaging, processing, transshipping or transporting of fishery resources that have not been previously landed at a port, as well as the provisioning of personnel, fuel, gear and other supplies at sea;
  - (d) “foreign vessel” means a vessel flying the flag of another Contracting Party;
  - (e) “illegal, unreported and unregulated fishing” refers to the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, and includes fishing related activities in support of such fishing, hereinafter referred to as IUU fishing;
  - (f) “non-Contracting Party vessel” means any vessel not flagged to a Contracting Party of SEAFO, including vessels for which there are reasonable grounds for suspecting them to be without nationality;
  - (g) “patrol vessel” means any ship clearly marked and identifiable as being on Government service and authorized to carry out inspections and related MCS operations/activities to ensure compliance with SEAFO Conservation and Management Measures.
  - (h) “port” includes offshore terminals and other installations for landing, transshipping, packaging, processing, refuelling or resupplying; and
  - (i) “vessel” means fishing vessel and fishing research vessel.

### **Article 3 – Co-operation and contact points**

1. Contracting Parties shall consult, co-operate and exchange information with other Contracting Parties and/or the Executive Secretary in order to facilitate the implementation of this System, taking into account the appropriate confidentiality requirements.
  
2. Contracting Parties shall designate the competent authority which shall act as the contact point for the purposes of receiving reports in accordance with Articles 11, 13, 14, 17, 23 and 24 and for receiving notifications and issuing authorisations in accordance with Articles 21 and 22. Each Contracting Party shall send to the Executive Secretary the telephone number, e-mail address and fax number of at least two designated contact points before March 15, 2013. Any subsequent changes to the list shall be notified to the Executive Secretary at least fifteen days before the change shall come into force. The Executive Secretary shall put the details of the contact points and any changes thereto on the SEAFO website without delay.



## CHAPTER II

### Control measures

#### Article 4 – Authorisation and notification to fish

1. Each Contracting Party shall submit electronically and annually to the Executive Secretary, by 1 January, the list of its vessels that are authorised to operate in the Convention Area. This list shall include the following information:
  - (a) name of vessel, registration number, previous names (if known), and port of registry;
  - (b) previous flag (if any);
  - (c) International Radio Call Sign;
  - (d) IMO number<sup>1</sup>
  - (e) name and address of owner or owners;
  - (f) where and when built;
  - (g) type of vessel;
  - (h) length;
  - (i) name and address of operator (manager) or operators (managers) (if any);
  - (j) type of fishing method or methods;
  - (k) moulded depth;
  - (l) beam;
  - (m) gross tonnage; and
  - (n) power of main engine or engines.
2. Each Contracting Party shall promptly notify, after the establishment of the SEAFO record, the Executive Secretary of any addition to, any deletion from and/or any modification of the SEAFO record at any time such changes occur.
3. The Executive Secretary shall maintain the SEAFO record, and take any measure to ensure publicity of the record and through electronic means, including placing it on the SEAFO website, in a manner consistent with confidentiality requirements noted by Contracting Parties.

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<sup>1</sup> Deadline for implementation is 1<sup>st</sup> Jan 2017

4. Each Contracting Party shall:
  - (a) authorise their vessels to operate in the Convention Area only if they are able to fulfil in respect of these vessels the requirements and responsibilities under the Convention, this System and its conservation and management measures;
  - (b) take necessary measures to ensure that their vessels comply with this System and all the relevant SEAFO conservation and management measures;
  - (c) take necessary measures to ensure that their vessels on the SEAFO record keep on board valid certificates of vessel registration and valid authorisation to fish and/or tranship;
  - (d) ensure that its vessels on the SEAFO record have no history of IUU fishing, if those vessels have such history, the new owners have provided sufficient evidence demonstrating that the previous owners and operators have no legal, beneficial or financial interest in, or control over those vessels, or that having taken into account all relevant facts, its vessels are not engaged in or associated with IUU fishing;
  - (e) ensure, to the extent possible under domestic law, that the owners and operators of its registered vessels on the SEAFO record are not engaged in or associated with fishing activities conducted in the Convention Area by vessels not registered into the SEAFO record; and
  - (f) take necessary measures to ensure, to the extent possible under domestic law, that the owners of the vessels on the SEAFO record are citizens or legal entities within that Contracting Party so that any control or punitive actions can be effectively taken against them.
5. Each Contracting Party shall review their own internal actions and measures taken pursuant to Article 4, including punitive actions and sanctions and in a manner consistent with domestic law as regards disclosure, report the results of the review to the Commission at its annual meetings. In consideration of the results of such review, the Commission shall, if appropriate, request the Contracting Party with vessels on the SEAFO record to take further action to enhance compliance by those vessels to this System and the SEAFO conservation and management measures.
6. Each Contracting Party shall take measures, under their applicable legislation, to prohibit the fishing and fishing related activities on fishery resources covered by the Convention by the vessels which are not registered into the SEAFO record.
7. Each Contracting Party shall notify the Executive Secretary of any factual information showing that there are reasonable grounds for suspecting vessels not registered on the SEAFO record to be operating in the Convention Area.

## Article 5 – Prohibition of transhipments in the Convention Area

Each Contracting Party shall ensure that its vessels are not involved in transhipment in the Convention Area on fishery resources covered by the Convention

## Article 6 – Vessel requirements

1. Each Contracting Party shall ensure that:
  - (a) its vessels carry on board documents issued and certified by the competent authority of that Contracting Party, including, as a minimum, the following:
    - i. registration document;
    - ii. license, permit or authorisation to fish or to engage in research fishing activities and terms and conditions attached to the licence, permit or authorisation;
    - iii. vessel name;
    - iv. port in which registered, and the number(s) under which registered;
    - v. International Radio Call Sign (if any);
    - vi. names and addresses of owner(s) and where relevant, the charterer;
    - vii. overall length;
    - viii. power of main engine or engines in KW/horsepower; and
    - ix. certified drawings or description of all fish holds, including storage capacity in cubic feet or metres.
  - (b) above documents are checked on a regular basis; and
  - (c) any modification to the documents referred to in subparagraph (a) is certified by the competent authority of that Contracting Party.
2. Each Contracting Party shall ensure that its vessels authorised to operate in the Convention Area are marked in such a way that they can be readily identified with generally accepted international standards, such as the FAO Standard Specification for the Marking and Identification of Fishing Vessels.

## Article 7 – Marking of gear

Each Contracting Party shall ensure that gears used by its vessels authorised to operate in the Convention Area are marked as follows: the ends of nets, lines and gear anchored in the sea shall be fitted with flag or radar reflector buoys by day and light buoys by night sufficient to indicate their position and extent. Such lights should be visible at a distance of at least two nautical miles in good visibility. Marker buoys and similar objects floating on the surface and intended to indicate the location of fixed fishing gear shall be clearly marked at all times with the letter(s) and/or number(s) of the vessel to which they belong.

## Article 8 – Retrieval of lost or abandoned fishing gear

Each Contracting Party shall ensure that:

- (a) vessels operating with any gear shall have equipment on board to retrieve lost or abandoned gear;
- (b) a vessel that has lost or abandoned gear shall make every reasonable attempt to retrieve it as soon as possible;
- (c) no vessel shall deliberately abandon fishing gear, except for safety reasons, notably vessels in distress and/or life in danger; and
- (d) if the lost gear cannot be retrieved the vessel shall notify the competent authorities of its flag State within 24 hours of the following:
  - i. the name and call sign of the vessel;
  - ii. the type of lost gear;
  - iii. the quantity of gear lost;
  - iv. the time when the gear was lost;
  - v. the position where the gear was lost; and
  - vi. measures taken by the vessel to retrieve lost gear.
- (e) following retrieval of lost gear, the vessel shall notify the flag State Contracting Party within 24 hours of the following:
  - i. the name and call sign of the vessel that has retrieved the gear;
  - ii. the name and call sign of the vessel that lost the gear (if known);
  - iii. the type of gear retrieved;

- iv. the quantity of gear retrieved;
  - v. the time when the gear was retrieved; and
  - vi. the position where the gear was retrieved.
- (f) The flag State shall without delay notify the Executive Secretary of the information referred to in paragraphs (d) and (e). The Executive Secretary shall without delay put this information on the SEAFO website.

## **Article 9 – Labelling of frozen products of fishery resources**

Each Contracting Party shall ensure that:

- (a) when frozen, all fishery products caught and retained onboard within the Convention Area shall be identified by a clearly legible label or stamp. The label or stamp, on each box, carton, container, bag or block of frozen fishery products, shall indicate the species (using the relevant FAO 3-Alpha code), presentation, production date, the SEAFO Division where the catch was taken and the name of the catching vessel;
- (b) labels shall be securely affixed, stamped or written on packaging at the time of stowage and be of a size that can be clearly read by inspectors in the normal course of their duties;
- (c) labels shall be marked in ink on a contrasting background; and
- (d) each package shall contain only:
  - i. one product form/type category;
  - ii. one division of capture;
  - iii. one date of production; and
  - iv. one species.

## CHAPTER III

### Monitoring of Fisheries

#### Article 10 - Information on fishing activities

1. Each Contracting Party shall ensure that its vessels keep a bound fishing logbook with consecutively numbered pages and, where appropriate, a production logbook, stowage plan or a research plan and that the fishing logbook contains the following:
  - (a) each entry into and exit from the Convention Area;
  - (b) the cumulative catches by species (using the relevant FAO 3 Alpha Code) by live weight (Kg), the proportion of the catch by live weight (Kg) retained on board, including retained by-catch species and discarded TAC species; and
  - (c) for each haul:
    - i. catch retained on board by species in live weight (Kg) and an estimation of the amount of fishery resources discarded (Kg), by species;
    - ii. all non TAC species discarded for which the total live weight is less than 10 kg, may be reported using the 3-Alpha Code MZZ (Miscellaneous Marine Species);
    - iii. the type of gear (trawl, pots, longline, etc.);
    - iv. the description of gear (number of hooks, number of pots, size of the trawl, etc.);
    - v. the longitude and latitude co-ordinates of shooting and hauling; and
    - vi. the date and time of shooting and hauling (UTC).
  - (d) after each report, pursuant to article 11 and 13 (f), the following details shall be entered in the logbook immediately:
    - i. date and time (UTC) of transmission of the report; and
    - ii. in the case of a radio transmission, the name of the radio station through which the report is transmitted.
2. Each Contracting Party shall ensure that its vessels:
  - (a) submit the fishing logbook data within 30 days of the completion of a fishing trip in the convention Area; and
  - (b) submit the fishing logbook data to the Secretariat in the electronic format as provided in the Reporting Forms section on the SEAFO website.
3. Each Contracting Party shall ensure that its vessels, which process and/or freeze their

catch shall:

- (a) record their cumulative production by species (using the relevant FAO 3-Alpha Code), by live weight (Kg), including by-catch and product form/type in a production logbook; and/or
  - (b) stow in the hold all processed catch in such a way that the location of each species can be identified from a stowage plan maintained by the vessel.
4. The quantities recorded shall correspond to the quantities kept on board. The original recordings contained in the fishing logbooks shall be kept on board the vessel for a period of at least 12 months.

### **Article 11 – Communication of catches by vessels**

1. Each Contracting Party shall ensure that its vessels authorised to operate in the Convention Area shall communicate catch reports to its FMC in accordance with the specifications set out in Annex II A by electronic means, or other appropriate means. The timing and content of the reports shall include the following:
  - (a) entry report (COE). This report shall be transmitted no more than 12 hours and at least 6 hours in advance of each entry into the Convention Area and shall include entering date, time, geographical position of the vessel and the quantity of fishery resources on board by species (using the relevant FAO 3-Alpha Code) and by live weight (Kg);
  - (b) catch report (CAT). The aggregated catch for consecutive 5 days shall be recorded by division, by species (using the relevant FAO 3 Alpha Code) and by live weight (Kg), including retained by-catch species and discarded TAC species, every 5 days, or more frequently as required by the Contracting Party. Nil catch retained and nil discards of all species shall be reported using the 3-Alpha Code MZZ and quantity as “0”; and
  - (c) exit report (COX). This report shall be made no more than 12 hours and at least 6 hours in advance of each exit from the Convention Area. The report shall include exiting date, time, geographical position of the vessel, the number of fishing days and the catch taken by species (using the relevant FAO 3-Alpha Code) and by live weight (Kg) since the commencement of fishing in the Convention Area, or since the last catch report.
2. Each Contracting party shall ensure that its FMC upon receipt, transmits electronically the reports referred to in paragraph 1 to the Executive Secretary in the format prescribed in Annex II A without delay.

## **Article 12 – Periodic reporting of catch and fishing effort by Contracting Parties**

1. Each Contracting Party shall report to the Executive Secretary the aggregated retained and discarded catch of fishery resources listed in Annex I, and by-catch species, in accordance with the specifications and format set out in Annex II B attached, in kilograms per species, taken by its vessels in the Convention Area on a quarterly basis. Such reports shall specify the months to which each report refers and shall be submitted within 30 days following the end of the quarter in which the fishing occurred.
2. The Executive Secretary shall, within 15 days following the quarterly deadlines for receipt of the provisional catch statistics, collate the information received and circulate it to the Contracting Parties.

## **Article 13 – Vessel Monitoring System (VMS)**

1. Each Contracting Party shall ensure that its vessels implement a satellite based vessel monitoring system and:
  - (a) be equipped with a Vessel Locating Device (VLD) able to automatically transmit VMS data to the land based Fisheries Monitoring Centre (FMC) of its flag State allowing a continuous tracking of the position of the vessel by the flag State;
  - (b) the VLD fitted on board the vessel shall be able to continuously collect and transmit, at any time, to the FMC of the flag State the following data:
    - i. the vessel's identification;
    - ii. the most recent geographical position of the vessel (longitude and latitude) with a margin of error lower than 500 metres, with a confidence interval of 99%;
    - iii. course of the vessel;
    - iv. speed of the vessel; and
    - v. the date and time that the position of the vessel has been transmitted.
  - (c) the satellite tracking devices on its vessels are permanently operational and that the information referred to in sub-paragraph (b) is collected and automatically transmitted at least every 2 hours;
  - (d) its vessels do not enter the Convention Area and commence operations with a defective VLD;
  - (e) in the event of a technical failure or non-operation of the VLD fitted on board a vessel, the device shall be repaired or replaced within a month. After this period, the vessel is not authorised to begin a new trip with a defective VLD. If the trip is



lasting more than one month, the repair or the replacement has to take place as soon as the vessel enters a port; the vessel shall not be authorised to begin a new trip without a VLD having been repaired or replaced; and

- (f) that a vessel with a defective VLD shall manually communicate to the flag State FMC, at least daily, reports containing the information in sub-paragraph (b) by other means of communication (email, radio, fax, etc.).
2. Each flag State shall provide a copy of the reports required in accordance with this Article to the Executive Secretary, as soon as possible after receipt, but not later than 24 hours following the receipt of the reports and messages by the FMC.
3. Each flag State shall ensure that the reports and messages transmitted to the Executive Secretary shall be in accordance with the data exchange format in Annex III.

#### **Article 14 – Monitoring of transshipments in ports**

1. Each Contracting Party shall ensure that its vessels carrying fishery resources caught and covered by the Convention in the Convention Area shall only tranship in port of a Contracting Party if they have prior authorisation from both its flag State and the port. Each Contracting Party shall further ensure that transshipments are consistent with the reported catch of each vessel and require the reporting of transshipment in accordance with the format set out in Annex IV.
2. Each flag State shall ensure its vessels which tranships in port to another vessel, hereinafter referred to as “the receiving vessel”, any quantity of catches of fishery resources covered by the Convention and fished in the Convention Area shall, at the time of the transshipment inform the flag State of the receiving vessel of the fishery resources and quantities involved, of the date of the transshipment and the location of catches. The vessel shall submit to its flag State a SEAFO transshipment declaration in accordance with the format set out in Annex IV. The vessel shall notify, at least 24 hours in advance, the following information to the port State:
  - (a) the date, time and port of transshipment;
  - (b) the names of the transshipping vessels;
  - (c) the names of the receiving vessels; and
  - (d) the tonnage of fishery resources by species to be transhipped.
3. Each flag State shall ensure its vessels, not later than 24 hours before the beginning of the transshipment, and at the end of a transshipment, the receiving vessel shall inform the competent authorities of the port state, of the quantities of catches by species of fishery resources covered by the Convention on board the vessel. The vessel shall transmit the SEAFO transshipment declaration to the competent authorities within 24 hours. The receiving vessel shall, 48 hours before landing, submit a SEAFO transshipment

declaration to the competent authorities of the port State where the landing takes place.

4. Each Contracting Party involved in the transshipment shall take the appropriate measures to verify the accuracy of the information received and shall cooperate with the flag State referred in paragraph 1 to ensure that landings are consistent with the reported catches of each vessel. Each Contracting Party shall notify annually to SEAFO the details of transshipments by its vessels in accordance with paragraphs 1, 2, and 3.

## **CHAPTER IV**

### **At sea inspection**

#### **Article 15 – Scope and application**

Until a SEAFO sea inspection programme has been adopted, each Contracting Party undertaking inspections by its patrol vessels at sea on a vessel operating, or suspected of operating, on fishery resources covered by the Convention in the Convention Area, will do so by applying the relevant provisions in part VI of the United Nations Fish Stocks Agreement, that came into force 11 November 2001.

#### **Article 16 – Notification to inspect at sea**

1. Each Contracting Party shall, no later than 30 days prior to commencement of the initial sea inspection, notify the Executive Secretary of:
  - (a) the provisional plan, names of inspectors and inspector trainees and the name, radio call sign and communication contact information of each inspection vessel it has assigned to sea inspection duties applying the provisions provided in Article 15; and
  - (b) any changes to the particulars so notified prior to subsequent sea inspections.
2. Upon receiving such information, the Executive Secretary shall post the information received from Contracting Parties on the secure part of the SEAFO website.
3. Each Contracting Party may request information from the Executive Secretary regarding fishing within the Convention Area to assist with the co-ordination of their deployment of resources for sea inspection purposes.

#### **Article 17 – At sea inspection reports and procedures**

1. Inspectors shall complete the approved SEAFO inspection report form as provided in Annex V, and apply the following procedures:
  - (a) the inspector shall provide a written explanation, on the inspection report form, of any alleged violation of SEAFO measures. The inspector shall allow the master of the vessel being inspected to comment, on the inspection report form, about any aspect of the inspection;

(b) the inspector shall sign the inspection report form. The master of the inspected vessel shall be invited to sign the inspection report form to acknowledge receipt of the report;

(c) before leaving the vessel that has been inspected, the inspector shall give the master of that vessel a copy of the completed inspection form; and

(d) the inspector shall provide a copy of the completed inspection form along with photographs and video footage to the competent authority of the inspecting Contracting Party not later than 15 days of arrival into port.

2. The inspecting Contracting Party shall forward a copy of the inspection form in electronic format not later than 15 days from its reception along with two copies of photographs and video footage to the Executive Secretary who shall forward one copy of this material to the flag State of the inspected vessel not later than seven days from receipt.
3. Fifteen days after the transmission of the completed inspection form to the flag State, the Executive Secretary shall, in the case where an alleged infringement is detected, transmit that form to all Contracting Parties together with comments or observations, if any, received from the flag State.
4. Any supplementary reports or information shall be provided to the Executive Secretary. The Executive Secretary shall provide such reports or information to the flag State of the vessel, which shall then be afforded 15 days to comment. In the case where an alleged infringement is detected, all supplementary reports or information provided, and any comments received from the flag State of the vessel, if any, shall be forwarded to all Contracting Parties, by the Executive Secretary, without delay.

## **CHAPTER V**

### **Observer Programme**

#### **Article 18 – Scientific observer programme**

1. Each Contracting Party shall ensure that all its vessels operating in the Convention Area shall carry scientific observers qualified by the flag State. Flag States shall ensure that the relevant data is transmitted to Executive Secretary in the format specified by the Scientific Committee using the scientific observer forms and report template as provided in the Reporting Forms section on the SEAFO website.
2. Each Contracting Party shall require the submission of this information, in respect of each vessel flying its flag, within 30 days of leaving the Convention Area. The Contracting Party shall provide a copy of the information to the Executive Secretary as soon as possible, taking account of the need to maintain confidentiality of non-aggregated data.

## CHAPTER VI

### Port State control

#### Article 19 – Scope

Each Contracting Party shall, in accordance with duties under article 15 of the SEAFO Convention maintain an effective system of port State control for all vessels that have been engaged in fishing or fishing related activities in the Convention Area, except container vessels that are not carrying fishery resources or, if carrying fishery resources, only fishery resources that have been previously landed, provided that there are no clear grounds for suspecting that such a vessel has engaged in fishing related activities in support of IUU fishing.

#### Article 20 - Designation of ports

1. Each Contracting Party shall designate, publicize and notify the Executive Secretary about the ports to which foreign vessels may request entry.
2. Each Contracting Party shall, to the greatest extent possible, ensure that designated ports have sufficient capacity to conduct inspections and take other measures in accordance with obligations set out by SEAFO.
3. The Executive Secretary shall establish a register of all ports designated by Contracting Parties. The register shall include accompanying information, such as associated conditions of entry and the period of notice required, and shall be published, and updated as required, on the SEAFO website.

#### Article 21 – Advance request for port entry of foreign vessels

Each Contracting Party shall, before granting entry to a foreign vessel to its port, as a minimum standard, require the information set out in Annex VI to be provided at least 48 hours before the estimated time of arrival. A Contracting Party may provide for another notification period, taking into account, *inter alia*, the distance between the fishing grounds and its ports. In such a case the Contracting Party concerned shall without delay inform the Executive Secretary, who shall put this information on the SEAFO website. Any other subsequent changes to the requirements shall be notified to the Executive Secretary at least 30 days before the changes becomes effective.

#### Article 22 – Port entry; authorisation or denial of foreign vessels

1. After receiving the information required pursuant to Article 21, as well as such other information as it may require to determine whether the vessel requesting entry into its port has engaged in IUU fishing, each Contracting Party shall decide whether to authorise or deny the entry of the vessel into its port and shall communicate this decision to the

master of the vessel or to the vessel's representative.

2. In the case of authorization of entry, the master of the vessel or the vessel's representative shall be required to present the authorisation for entry to the competent authorities of the Contracting Party upon the vessel's arrival at port.
3. In the case of denial of entry, the Contracting Party shall communicate its decision taken pursuant to paragraph 1 of this Article to the flag State of the vessel and to the Executive Secretary, who shall put this information on the SEAFO website.
4. Without prejudice to paragraph 1 of this Article, when a Contracting Party has sufficient proof that a vessel seeking entry into its port has engaged in IUU fishing, in particular the inclusion of a vessel on a list of vessels having engaged in such fishing or fishing related activities adopted by SEAFO or another relevant regional fisheries management organisation, the Contracting Party shall deny that vessel entry into its ports.
5. In addition to paragraphs 3 and 4 of this Article, a Contracting Party may allow entry into its ports of a vessel referred to in those paragraphs exclusively for the purpose of inspecting it and taking other appropriate actions in conformity with international law which are at least as effective as denial of port entry in preventing, deterring and eliminating IUU fishing.
6. Where a vessel referred to in paragraph 4 or 5 of this Article is in port for any reason, a Contracting Party shall deny such vessel the use of its ports for landing, transshipping, packaging, and processing of fishery resources and for other port services including, *inter alia*, refuelling and resupplying, maintenance and dry-docking. Paragraphs 2 and 3 of Article 23 apply *mutatis mutandis* in such cases.

### **Article 23 – Use of ports by foreign vessels**

1. Where a vessel has entered one of its ports, a Contracting Party shall deny that vessel the use of the port for landing, transshipping, packaging and processing of fishery resources that have not been previously landed and for other port services, including, *inter alia*, refuelling and resupplying, maintenance and dry-docking, if:
  - (a) the Contracting Party finds that the vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by its flag State;
  - (b) the flag State does not confirm within a reasonable period of time, on the request of the port State, that the fishery resources on board was taken in accordance with applicable requirements of SEAFO; or
  - (c) the Contracting Party has reasonable grounds to believe that the vessel was otherwise engaged in IUU fishing, including in support of a vessel referred to in paragraph 4 of Article 22, unless the vessel can prove:
    - i. that it was acting in a manner consistent with relevant conservation and management measures; or

- ii. in the case of provision of personnel, fuel, gear and other supplies at sea, that the vessel that was provisioned was not, at the time of provisioning, a vessel referred to in paragraph 4 of Article 22.
2. In addition to paragraph 1 of this Article, a Contracting Party shall not deny a vessel referred to in that paragraph the use of port services:
  - (a) essential to the safety or health of the crew or the safety of the vessel, provided these needs are duly proven; or
  - (b) where appropriate, for the scrapping of the vessel.
3. Where a Contracting Party has denied the use of its port in accordance with this Article, it shall promptly notify the flag State and the Executive Secretary, who shall put this information on the SEAFO website.

## **Article 24 – Inspections**

1. Each Contracting Party shall ensure that inspections of vessels are carried out by authorised inspectors trained and familiar with the Convention and relevant conservation and management measures adopted by the Commission. Inspector training programs shall take into account the elements set out in Annex VII, and Contracting Parties shall seek to cooperate in this regards.
2. Prior to an inspection, the inspector shall present to the master of the vessel an appropriate identity document.
3. Each Contracting Party shall ensure that inspections of vessels in their ports are carried out at least in accordance with the procedures set out in Annex VIII.
4. The port State may invite inspectors of other Contracting Parties to accompany their own inspectors and observe the inspection of landings or transshipment operations of fishery resources caught by foreign vessels.
5. Each Contracting Party shall ensure that their inspectors make all possible efforts to avoid unduly delaying a vessel and that the vessel suffers the minimum interference and inconvenience, and that degradation of the quality of the fish resources is avoided.
6. On completion of the inspection, the port Contracting Party inspector shall provide the Master of the foreign fishing vessel with the inspection report containing the findings of the inspection, including possible subsequent measures that could be taken by the port Contracting Party. The Master shall be given the opportunity to add any comments or objection to the report and to contact the flag State. The inspector and the Master shall sign the report and a copy of the report shall be provided to the Master. The Master's signature shall serve only as acknowledgement of the receipt of a copy of the report.
7. The port Contracting Party shall transmit a copy of the inspection report to the SEAFO Secretariat no later than 14 days following the date of completion of the inspection. If the inspection report cannot be transmitted within 14 days, the port Contracting Party should



notify the SEAFO Secretariat within the 14 day time period the reasons for the delay and when the report will be submitted. The report will also include the information set out in Annex IX.

## **Article 24 bis - Procedure in the event of apparent infringements**

1. If the information collected during the inspection provides evidence that a foreign fishing vessel has committed an apparent infringement of the SEAFO conservation and management measures, the inspector shall:

- a) record the apparent infringement in the inspection report;
- b) transmit the inspection report to the port Contracting Party competent authority, which shall promptly forward a copy to the SEAFO Secretariat and to the flag State point of contact and, as appropriate, the relevant coastal State;
- c) to the extent practicable, ensure safekeeping of the evidence pertaining to such apparent infringement. If the infringement is to be referred to the flag State for further action, the port Contracting Party shall promptly provide the evidence collected to the flag State.

2. If the apparent infringement falls within the legal jurisdiction of the port Contracting Party, the port Contracting Party may take action in accordance with its domestic laws. The port Contracting Party shall promptly notify the action taken to the flag State, the relevant coastal State, as applicable, and the SEAFO Secretariat, which shall promptly publish this information in a secured part of the SEAFO website.

3. Apparent infringements that do not fall within the jurisdiction of the port Contracting Party, and apparent infringements referred to in Article 24 bis 2 for which the port Contracting Party has not taken action, shall be referred to the flag State and, as appropriate, the relevant coastal State. Upon receiving the copy of the inspection report and evidence, the flag Contracting Party shall promptly investigate the infringement and notify the SEAFO Secretariat of the status of the investigation and of any enforcement action that may have been taken within 6 months of such receipt. If the flag Contracting Party cannot notify the SEAFO Secretariat this status report within 6 months of such receipt, the flag Contracting Party should notify the SEAFO Secretariat within the 6 month time period the reasons for the delay and when the status report will be submitted. The SEAFO Secretariat shall promptly publish this information in a secured part of the SEAFO website. Contracting Party shall report to the Secretariat the information regarding the status of such investigations.

4. Should the inspection provide evidence that the inspected vessel has engaged in IUU activities as referred to in Article 28.4, the port Contracting Party shall promptly report the case to the flag State, and the relevant coastal Contracting Party, as applicable, and notify as soon as possible the SEAFO Secretariat, along with its supporting evidence, for the purpose of inclusion of the vessel in the draft IUU list.

## **Article 25 – Role of flag State**

1. Each Contracting Party shall require its vessels to cooperate with the port State in inspections carried out pursuant to this regulation.
2. When a Contracting Party has clear grounds to believe that one of its vessels has engaged in IUU fishing and is seeking entry to or is in the port of another Contracting Party, it shall, as appropriate, request that Contracting Party to inspect the vessel or to take other adequate measures.
3. Where, following port State inspection, a flag State receives an inspection report indicating that there are clear grounds to believe that a vessel entitled to fly its flag has engaged in IUU fishing, it shall immediately and fully investigate the matter and shall, upon sufficient evidence, take enforcement action without delay in accordance with its laws and regulations.
4. Each Contracting Party shall, in its capacity as a flag State, report to the Executive Secretary on actions it has taken in respect of its vessels that, as a result of port State measures taken pursuant to this Chapter, have been determined to have engaged in IUU fishing.

## **Article 26 – Application**

1. This Chapter shall be applied to all Contracting Party's ports; within the coastal States, which have areas of national jurisdiction adjacent to the Convention Area.
2. Each Contracting Party which does not have areas of national jurisdiction adjacent to the Convention Area shall endeavour to apply this Chapter.

## CHAPTER VII

### Measures to promote compliance

#### Article 27 – Sightings and identifications of non-contracting party vessels

1. Each Contracting Party shall ensure that its vessels report information to its flag State on any possible fishing and fishing related activities by vessels flying the flag of a non-contracting party in the Convention Area. This information shall contain, inter alia:
  - (a) name of the vessel;
  - (b) registration number of the vessel;
  - (c) flag State of the vessel;
  - (d) date, time and position of sighting; and
  - (e) any other relevant information regarding the sighted vessel.
2. Each Contracting Party shall submit this information to the Executive Secretary as rapidly as possible. The Executive Secretary shall forward this information to the Contracting Parties for information and for consideration at the next SEAFO Annual Meeting.

## Article 28 – Listing of IUU vessels

1. Contracting Parties shall every year, and at least 120 days before the Annual Meeting of the Commission, transmit to the Executive Secretary a list of vessels presumed to be carrying out IUU activities in the Convention Area during the current and previous year, accompanied by the supporting evidence, as provided in paragraph 3, concerning the presumption of this IUU fishing.
2. At each Annual Meeting, the Commission shall identify those vessels which have engaged in fishing and fishing related activities for fishery resources covered by the Convention in a manner which is inconsistent with SEAFO conservation and management measures, and shall establish a list of such vessels (the IUU Vessel List), in accordance with the procedures and criteria set out below.
3. This identification shall be documented, *inter alia*, on reports from a Contracting Party relating to SEAFO conservation and management measures, trade information obtained on the basis of relevant trade statistics such as Food and Agriculture Organization of the United Nations (FAO) data, statistical documents and other national or international verifiable statistics, as well as any other information obtained from port States and/or gathered from the fishing grounds which is suitably documented.
4. Vessels engaged in fishing and fishing related activities for fishery resources covered by the Convention are presumed to have carried out IUU fishing in the Convention Area when a Contracting Party presents evidence that such vessels, *inter alia*:
  - (a) harvest fishery resources covered by the Convention in the Convention Area and are not on the SEAFO Record of authorized vessels; or
  - (b) harvest fishery resources covered by the Convention, when its flag State is without or has exceeded its quotas, catch limit or effort allocation established by SEAFO conservation and management measures; or
  - (c) do not record or report their catches made in the Convention Area, or make false reports; or
  - (d) take or land undersized fish in contravention of SEAFO conservation and management measures; or
  - (e) fish during closures in contravention of SEAFO conservation and management measures; or
  - (f) use prohibited fishing gear in contravention of SEAFO conservation and management measures; or
  - (g) tranship with, participate in joint fishing operations with, support or re-supply vessels included in the IUU Vessel List; or
  - (h) are without nationality and harvest fishery resources covered by the Convention in the Convention Area; or

- (i) engage in fishing activities contrary to any other SEAFO conservation and management measures; or
- (j) are under the control of the owner of any vessel on the SEAFO IUU Vessel List.

### ***Draft IUU Vessel List***

5. On the basis of the information received pursuant to paragraph 1 and any other information at disposal, the Executive Secretary shall draw up a draft SEAFO IUU Vessel List and shall transmit it, together with all the supporting evidence provided, to all Contracting Parties, as well as to non-contracting parties with vessels on the List, at least 90 days before the Annual Meeting of the Commission.
6. Any comments related to paragraph 5 shall be transmitted to the Executive Secretary, at least 30 days before the Annual Meeting of the Commission, as appropriate, including verifiable evidence and other supporting information, showing that the vessels neither have operated in contravention of SEAFO conservation and management measures nor had the possibility of fishing or fishing related activities for fishery resources covered by the SEAFO Convention.
7. The Executive Secretary shall request each flag State with vessels on the draft IUU Vessel List to notify the owner of the vessels of their inclusion in that List, and of the consequences of their inclusion being confirmed in the IUU Vessel List.
8. Upon receipt of the draft IUU Vessel List, Contracting Parties shall closely monitor the vessels included in that List in order to determine their activities and possible changes of name, flag or registered owner.

### **Provisional IUU Vessel List**

9. On the basis of the information received pursuant to paragraph 6, the Executive Secretary shall draw up a provisional SEAFO IUU Vessel List, and transmit it, two weeks in advance of the Annual Meeting of the Commission, to the Contracting Parties and the non-contracting parties concerned, together with all the evidence provided.
10. Contracting Parties may at any time submit to the Executive Secretary any additional information which might be relevant for the establishment of the IUU Vessel List. The Executive Secretary shall circulate the information, together with all the evidence provided, to the Contracting Parties and to the non-contracting parties concerned, at least two weeks before the Annual Meeting of the Commission.
11. At each Annual Meeting, the Compliance Committee shall:
  - (a) following consideration of the draft IUU Vessel List and information and evidence circulated under paragraphs 5, 9 and 10, adopt a Provisional IUU Vessel List and submit it to the Commission for approval; and
  - (b) following consideration of the current IUU Vessel List and the information and

evidence circulated under paragraph 9, recommend to the Commission which, if any, vessels should be removed from the current IUU Vessel List.

12. A vessel shall be included in the provisional IUU Vessel List only if one or more of the criteria in paragraph 4 have been satisfied.
13. The Commission shall remove a vessel from the provisional SEAFO IUU Vessel List if the vessel's flag State demonstrates that:
  - (a) the vessel did not engage in any of the IUU fishing described in paragraph 4; or
  - (b) effective action has been taken in response to the IUU fishing in question, including, *inter alia*, prosecution, and imposition of sanctions of adequate severity.
14. Following the examination referred to in paragraph 11, the Commission shall approve the provisional IUU Vessel List.
15. The Draft IUU Vessel List, Provisional IUU Vessel List and the IUU Vessel List shall contain the following details for each vessel:
  - (a) name and previous names, if any;
  - (b) flag and previous flags, if any;
  - (c) owner and previous owners, including beneficial owners, if any;
  - (d) operator and previous operators, if any;
  - (e) call sign and previous call signs, if any;
  - (f) IMO number, classification authority, Lloyds, etc.;
  - (g) photographs, where available;
  - (h) date first included on the IUU Vessel List; and
  - (i) summary of activities which justify inclusion of the vessel on the List, together with references to all relevant documents informing of and evidencing those activities.

### **IUU Vessel List**

16. Once the Commission adopts the IUU Vessel List, it shall request Contracting Parties and non-contracting parties with vessels on the SEAFO IUU Vessel List to:
  - (a) notify the owner of the vessels of its inclusion on the IUU Vessel List and the consequences which result from being included in the List; and
  - (b) take all the necessary measures to eliminate these IUU fishing, including, if necessary, the withdrawal of the registration or the fishing licenses of these vessels, and to inform the Commission of the measures taken in this respect.

17. Contracting Parties shall take all necessary measures under their applicable legislation and pursuant to paragraphs 56 and 66 of the IPOA-IUU, to:
- (a) ensure that its vessels do not participate in any transshipment with, support or re-supply vessels on the IUU Vessel List;
  - (b) ensure that vessels on the IUU Vessel List that enter ports voluntarily are not authorized to land, tranship, refuel or re-supply therein but are inspected upon entry;
  - (c) prohibit the chartering of a vessel on the IUU Vessel List;
  - (d) refuse to grant their flag to vessels on the IUU Vessel List;
  - (e) prohibit commercial transactions, imports, landings and/or transshipment of fisheries resources covered by the Convention from vessels on the IUU Vessel List;
  - (f) encourage traders, importers, transporters and others involved, to refrain from transactions in, and transshipment of, fishery resources covered by the SEAFO Convention caught by vessels on the IUU Vessel List; and
  - (g) collect, and exchange with other Contracting Parties, any appropriate information with the aim of searching for, controlling and preventing false import/export certificates for fishery resources covered by the Convention from vessels on the IUU Vessel List.
18. The Executive Secretary shall transmit the IUU Vessel List and any relevant information regarding the list to the secretariats of the Commission for the Conservation of Antarctic Marine Resources (CCAMLR), the Northwest Atlantic Fisheries Organization (NAFO), the North East Atlantic Fisheries Commission (NEAFC) and the South Indian Ocean Fisheries Agreement (SIOFA).
19. Upon receipt of the Final IUU Vessel Lists established by the following RFMOs: CCAMLR, NAFO, NEAFC and SIOFA, any information regarding the lists, the Executive Secretary shall circulate this information to the Contracting Parties. Vessels that have been added to or deleted from the respective lists that are flagged to non-contracting parties shall be incorporated into or deleted from the SEAFO IUU Vessel List as appropriate, unless any Contracting Party objects within 30 days of the date of transmittal by the Executive Secretary on the grounds that:
- (a) there is satisfactory information to establish that any of the requirements in paragraph 13 a) or b) have been met with regard to the Final IUU Vessel List of the following RFMOs: CCAMLR, NAFO, NEAFC and SIOFA; or
  - (b) there are satisfactory information to establish that none of the requirements in paragraph 13 a) or b) have been met with regard to a vessel taken off the respective lists.
20. In the event of an objection to a vessel listed by: CCAMLR, NAFO, NEAFC and SIOFA being incorporated into or deleted from the SEAFO IUU Vessel List, such vessel shall be placed on the Provisional IUU Vessel List. Paragraphs 5 to 8 shall not apply to vessels placed on the Provisional IUU Vessel List pursuant to this paragraph.

21. The Executive Secretary shall take any measure necessary to ensure publicity of the IUU Vessel List, in a manner consistent with any applicable confidentiality requirements, including placing it on the SEAFO website. Furthermore, the Executive Secretary shall transmit the IUU Vessel List to the FAO.
22. Without prejudice to the rights of Contracting Parties and coastal States to take proper action, consistent with international law, the Contracting Parties shall not take any unilateral trade measures or other sanctions against vessels on the draft or provisional IUU Vessel Lists, pursuant to paragraphs 5 or 9, or that have been removed from the IUU Vessel List, pursuant to paragraph 13, on the grounds that such vessels are involved in IUU fishing.

#### ***Deletion from the IUU Vessel List***

23. A Contracting Party or a non-contracting party with a vessel on the IUU Vessel List may request the removal of the vessel from the List during the intersessional period by providing information demonstrating that:
  - (a) it has adopted measures that will ensure that the vessel complies with all SEAFO measures;
  - (b) it will be able to assume effectively its responsibilities as regards the monitoring and control of the vessel's fishing and fishing related activities in the Convention Area;
  - (c) it has taken effective action in response to the IUU fishing that resulted in the vessel's inclusion in the IUU Vessel List, including prosecution and imposition of sanctions of adequate severity; and
  - (d) the vessel has changed ownership and that the new owner can establish that the previous owner no longer has any legal, financial or real interests in the vessel or exercises control over it, and that the new owner has not participated in IUU fishing.

#### **Article 29 – Summary of reporting obligations**

To facilitate compliance with SEAFO data submission requirements and schedules a summary checklist of reporting obligations will be circulated to all Contracting Parties within 30 days following any changes coming into effect and will be made available on the SEAFO website.



## CHAPTER VIII

### Research

#### Article 30 – Vessels conducting fishing research

1. No less than seven days prior to the commencement of a research period, the flag State Contracting Party shall:
  - (a) notify the Executive Secretary by electronic means of any vessel it has authorised to conduct fishing research in the Convention Area; and
  - (b) provide to the Executive Secretary a fishing research plan for any vessel flying its flag it has authorised to conduct research, including the purpose, location and, for vessels engaged in research, the dates during which the vessel will be engaged as a research vessel.
2. For vessels engaged in research, the flag State Contracting Party shall immediately notify the Executive Secretary upon termination of fishing research and submit a copy of the research data to the Executive Secretary. The Executive Secretary shall ensure that the SEAFO confidentiality protocol is followed for all research data submitted.
3. Each flag State Contracting Party shall notify the Executive Secretary not less than seven days before the effective date of any changes to the fishing research plan, and shall ensure that the master of the vessel shall maintain a record of the changes on board
4. Each flag State Contracting Party shall ensure that masters of vessels flying its flag shall at all times keep on board a copy of the fishing research plan in one of the official SEAFO languages.
5. Each flag State Contracting Party shall ensure that a vessel flying its flag shall not conduct commercial fishing during the research plan period.
6. Each flag State Contracting Party shall ensure that masters of vessels flying its flag shall keep a stowage plan, updated daily, showing the location of the different species by FAO 3-Alpha Code in the holds as well as the quantities of such species on board in kilograms product weight, labelled in accordance with Article 9. The stowage plan shall be kept on board until the vessel has been unloaded completely.
7. Following notification in accordance with paragraph 1 (a), the Executive Secretary shall without delay post the names of all vessels on the SEAFO website, including with such posting any supporting documents provided by the flag State Contracting Party, including the fishing research plan and any subsequent modifications.
8. Unless otherwise provided, vessels flying the flag of a Contracting Party that are conducting fishing research shall not be restricted by SEAFO conservation measures pertaining to the harvesting of fish in the Convention Area but may be subject to sea inspections pursuant to Article 15.

## ANNEX I

### FISHERY RESOURCES

FAO 3-Alpha Code	Species	Latin Name
ALF	Alfonsino	Family Berycidae
HOM	Horse Mackerel	Trachurus spp.
MAC	Mackerel	Scomber spp.
ORY	Orange Roughy	Hoplostethus spp.
SKA	Skates	Family Rajidae
SKH	Sharks	Order Selachomorpha
EDR	Armourhead	Pseudopentaceros spp.
CDL	Cardinal Fish	Epigonus spp.
CGE	Deep-sea Red Crab	Chaceon maritae
OCZ	Octopus	Family Octopodidae
SQC	Squid Family	Loliginidae
TOP	Patagonian toothfish	Dissostichus eleginoides
HCK	Hake Merluccius	Spp.
WRF	Wreckfish	Polyprion americanus
ORD	Oreo dories	Family Oreosomatidae

## ANNEX II.A

### COMMUNICATION OF CATCH BY VESSEL

1) "Catch on ENTRY" COE report

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
From	FR	M	Name of transmitting Party
Address	AD	M	Message detail; destination, "XSE" for SEAFO
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; message type, "COE" as Catch on Entry report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Master Name	MA	M	Name of the master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel.
Latitude	LA	M1	Activity detail; position at time of transmission
Longitude	LO	M1	Activity detail; position at time of transmission
Relevant Area	RA	M	SEAFO Division into which the vessel is about to enter
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
On Board	OB	M	Activity detail; Total quantity by species in kg, upon entry in the Convention Area. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //OB/speciesspaceweightspacspeciespaceweightspace species spaceweight//
Species live weight			
End of record	ER	M	System detail; indicates end of the record

1. Optional if the vessel is subject to satellite tracking in accordance with Article 13.

## 2) "Catch" (CAT) report

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, "XSE" for SEAFO
From	FR	M	Message detail; Address of the transmitting party (ISO-3)
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; message type, "CAT" as Catch report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Contracting Party Internal Reference Number	IR	O	Vessel registration detail; unique Contracting Party vessel number as ISO-3 flag State code followed by number
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel.
Relevant Area	RA	M	Activity detail; SEAFO Division
Latitude	LA	M <sup>1</sup>	Activity detail; position at time of transmission
Longitude	LO	M <sup>1</sup>	Activity detail; position at time of transmission
Catch  species live weight	CA	M	Activity detail; Catch retained onboard by species and by Division since last CAT report in kg. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes)+live weight in kg (until 9 digits), with each field separated by a space, e.g. //CA/speciesspaceweightspacspeciespaceweightspace speciesspaceweightspace//
Discarding  species live weight	RJ	M	Activity detail; Catch discarded by species and by Division since last CAT report, in kg. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kg (until 9 digits), with each field separated by a space, e.g. //RJ/speciesspaceweightspacspeciespaceweightspacspecies spaceweight//
Chartering Flag	CH	M <sup>2</sup>	Flag of Chartering Contracting Party to which the catch must be allocated.
Days Fished	DF	M <sup>3</sup>	Activity detail; number of fishing days in the Convention Area since last CAT report, as appropriate
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
End of record	ER	M	System detail; indicates end of the record

1. Optional if the vessel is subject to satellite tracking in accordance with Article 13.

2. Mandatory if fishing under chartering agreement.

3. The reporting period should be 5 days, or more frequently as required by the Contracting Party

Note: Nil catch retained and nil discards of all species shall be reported using the 3-Alpha Code MZZ (marine species not specified) and quantity as "0" as the following examples demonstrate //CA/MZZ 0// and //RJ/MZZ 0//

## 3) "Catch on EXIT" (COX) report

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, "XSE" for SEAFO
From	FR	M	Name of transmitting party
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; "COX" as Catch on Exit report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Master Name	MA	O	Name of master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Latitude	LA	O <sup>1</sup>	Activity detail; position at time of transmission
Longitude	LO	O <sup>1</sup>	Activity detail; position at time of transmission
Relevant Area	RA	M	SEAFO Division from which the vessel is about to exit
Catch  species live weight	OB	M	Activity detail; Total quantity by species on board, upon exit from the Convention Area. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kg (until 9 digits), with each field separated by a space, e.g. //OB/speciesspaceweightspacspeciespaceweightspacspecies spaceweight//
Days Fished	DF	O	Activity detail; number of fishing days in the Convention Area
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
End of record	ER	M	System detail; indicates end of the record

<sup>1</sup> Optional if the vessel is subject to satellite tracking in accordance with Article 13.

## ANNEX II.B COMMUNICATION OF CATCH BY CONTRACTING PARTY

### "Periodic Catch" (REP) Report

Data Element:	Code	Mandatory / Optional	Remarks:
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, "XSE" for SEAFO
From	FR	M	Message detail; Contracting Party sending the report
Record Number	RN	M	Message detail; Serial number of retransmission of the message/report by the FMC (annual count)
Record date	RD	M	Message detail; date of transmission
Record time	RT	M	Message detail; time of transmission
Type of Message	TM	M	Message detail; message type, REP for report of provisional monthly statistics of catches of fisheries resources
Year and month	YM	M	Reporting detail; relevant year and month of reporting
Relevant Area	RA		Reporting detail; SEAFO division where the catch is taken
Catch  species live weight	CA	M	Reporting detail; aggregate catch retained onboard by species and division since last REP report in kg taken in the Convention Area by vessels of the Contracting Party, allow for several pairs as needed  FAO species code
Discarding  species live weight	RJ	M	Activity detail; aggregated catch discarded by species and by Division since last REP report, in kg. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g.  //RJ/speciesspaceweightspacspeciespaceweightspac species spaceweight//
End of record	ER	M	System detail; indicates end of the record

Each data transmission shall be structured as follows:

- double slash (//) and the characters "SR" indicate the start of a message,
- a double slash (//) and the field code indicate the start of a data element,
- a single slash (/) separates the field code and the data,
- pairs of data are separated by a space,

the characters "ER" followed by a double slash (//) indicate the end of a record

## ANNEX III

### VMS REPORTING FORMAT

The first transmitted position report in the Convention Area detected by the flag State FMC shall be identified as “ENT”. All subsequent position reports shall be identified as “POS” except the first position report identified outside the Convention Area which shall be identified as “EXI”.

#### 1) VMS message sequence

Data Element	Code	Remarks
Entry	ENT	The first position report from a vessel detected to be inside the Convention Area
Position	POS	Position report every two hours
Exit	EXI	The first position report from a vessel detected outside the Convention area.

#### 2) VMS message format

Data Element	Code	Mandatory / Optional	Remarks
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; Destination SEAFO (XSE)
From	FR	M	Name of transmitting party
Record Number	RN	M	Message detail; Serial number of retransmission of the message/report by the FMC (annual count)
Record date	RD	M	Message detail; date of transmission
Record time	RT	M	Message detail; time of transmission
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; Message type; ENT, POS, EXI relating to entry, position or exit, as appropriate
Radio Call Sign	RC	M	Vessel Registration Detail; International Radio Call Sign
Trip Number	TN	O	Activity Detail; trip serial number in current year
Vessel Name	NA	O	Vessel Registration Detail; Vessel name
Internal Reference Number	IR	O	Vessel registration detail. Unique Contracting Party vessel number as ISO-3 flag State code followed by
External Registration Number	XR	O	The side number of the vessel
Latitude (decimal)	LT	M	Activity Detail; Vessel position at time of transmission
Longitude (decimal)	LG	M	Activity Detail; Vessel position at time of transmission
Speed	SP	M	Activity Detail; speed at time of transmission. Knots*10 e.g. //SP/105 = 10.5 knots
Course	CO	M	Activity Detail; course at time of transmission. 360° degree scale e.g. //CO/270 = 270
Date	DA	M	Message Detail; Date of transmission
Time	TI	M	Message Detail; Time of transmission
End of record	ER	M	System detail; indicates end of the record

### 3) Exchange Format and Protocols

Each VMS data transmission will:

- (a) Be transmitted in accordance with ISO 8859.1
- (b) Be structured as follows:
  - double slash ("/") and the characters "SR" indicate the start of a message;
  - a double slash ("/") and field code indicate the start of a data element;
  - a single slash ("/") separates the field code and the data;
  - pairs of data are separated by space;
  - the characters "ER" and a double slash ("/") at the end indicates the end of a record.
- (c) Include the address (AD) with SEAFO (XSE) as the destination
- (d) Include "record date" (RD), "record time" (RT), "record number" (RN) and "from" (FR) data elements

### 4) Return message error codes

If a Contracting Party so requests, the Secretary shall send a return message for each electronic transmission of a report or message

#### Return message format (RET message)

Data Element	Field Code	Mandatory/Optional	Remarks
Start Record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, Contracting Party sending the report
From	FR	M	Message detail; XSE is SEAFO (who is sending the return message)
Type of message	TM	M	Message detail; message type RET for return message
Radio call sign	RC	O	Reporting detail; international radio call sign of the vessel, copied from the report which is received.
Sequence number	SQ	O	Reporting detail; Serial number of the message/report as transmitted by the vessel (annual count)
Return Status	RS	M	Reporting detail; code showing whether the message is acknowledged or not (ACK or NAK)
Return error number	RE	O	Reporting detail; number showing the type of error. See table B) for return error numbers.
Record number	RN	M	Reporting detail; record number of the message which is received
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
End of Record	ER	M	System detail; indicates end of the record

#### Return message error codes

Subject/Article:	Errors		Error Cause
	Follow up action required	Accepted	
Communication	101		Message is unreadable
	102		Data value or size out of range
	104		Mandatory data missing
	105		This report is a duplicate; attempt to re-send a report previously rejected.
	106		Unauthorized data source
		150	Sequence error
		151	Date / Time in the future
Article 11		155	This report is a duplicate; attempt to re-send a report previously accepted.
	301		Catch (CAT) prior to catch on entry (COE)
	303		Catch on exit (COX) prior to catch on entry (COE)
	304		No position received prior to catch on exit (COX)
		350	Position without Catch on Entry (COE)



**ANNEX IV**

**SEAFO TRANSHIPMENT DECLARATION**

Name of vessel:

External identification:

Recipient Vessel

Radio Call sign if any:

SEAFO number:

Name:

Radio Call sign:

External identification:

Nationality of recipient vessel:

Day      Month      Hour      Year |2\_|0\_|\_|\_|

Agent's name:

Master's name:

Departure      |\_|\_|    |\_|\_|    |\_|\_|    from    |\_\_\_\_\_|

Return          |\_|\_|    |\_|\_|    |\_|\_|    to      |\_\_\_\_\_|

Signature:

Signature:

Transhipment      |\_|\_|    |\_|\_|    |\_|\_|                    |\_\_\_\_\_|

Indicate the weight in kilograms or the unit used (e.g. box, basket) and the landed weight in kilograms of this unit: |\_\_\_\_\_| kilograms <sup>(3)</sup> <sup>(4)</sup>

Species	Port of Transhipment <sup>(2)</sup>	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)
	Name of Port, Country	Whole	Gutted	Head off	Filletted						

## **TRANSHIPMENT DECLARATION**

### **1. General rule**

In the case of transshipment, the master of the vessel shall enter the quantities on the transshipment declaration. A copy of the transshipment declaration shall be handed to the master of the recipient vessel.

### **2. Procedure for completion**

- a. Entries on transshipment declaration shall be legible and indelible.
- b. No entry on the transshipment declaration may be erased or altered. If a mistake is made, the incorrect entry shall be struck out with a line and followed by a new entry initialed by the master or his agent.
- c. One transshipment declaration should be completed for each transshipment operations.
- d. Each page of the transshipment declaration shall be signed by the master.

### **3. Responsibilities of the master in respect of the landing declaration and the transshipment declaration**

The master of the vessel shall certify with his initials and signature that the estimated quantities entered on the transshipment declaration are reasonable. The copies of the transshipment declaration must be kept for one year.

### **4. Information to be provided**

The estimates of the quantities transhipped are to be indicated as follows, for each species, on one of the declaration forms in respect of a particular voyage:

- **Presentation of fish** (reference n° 1)

"*Presentation*" means the way fish has been processed. Indicate the nature of this processing if any: GUT for gutting, HEAD for heading, FILLET for filleting, etc ... Where no processing has taken place, WHOLE for whole fish.

- **Measurement unit for landed quantities** (reference n° 3)

Give the unit of weight used (e.g. basket, box, etc.) for landing fish and the weight of the unit in kilograms. This unit may be different from that used in the logbook.

- **Total weight species transhipped** (reference n° 4)

Give the weight or quantities actually transhipped for all fisheries resources covered by the SEAFO Convention. The weight should correspond to the weight of fish as landed, i.e. after any processing on board. Conversion coefficients will be applied subsequently by the appropriate authorities in the CPC to calculate the corresponding live weight.

- **Name of Port** (reference n° 2)

*Name of Port, Country* refers to the port and country in which the transshipment will take place.

### **5. Procedure of transmission**

- a. In the case of transshipment to a vessel flying the flag of a Contracting Party or registered in a Contracting Party, the first copy of the transshipment declaration shall be handed over to the master of the recipient vessel. The original shall be handed over or dispatched, as the case may be, to the authorities of the Contracting Party whose flag the vessel is flying or in which it is

registered, within 48 hours of completion of landing or on arrival in port.

- b. In the case of transshipment to a vessel flying the flag of a non-member country, the original document shall be handed over or sent, as the case may be, as soon as possible to the Contracting Party whose flag the vessel is flying or in which it is registered.
- c. In cases where it is impossible for the master to dispatch the original of the transshipment declarations to the authorities of the Contracting Party whose flag the vessel is flying or in which it is registered within the time limits specified, the information required in respect of the declaration shall be transmitted by radio or by other means to the authorities concerned.

The information shall be transmitted via the radio stations usually used, preceded by the name, the call sign and external identification of the vessel, and the name of its master. In cases where it is not possible for the message to be transmitted by the vessel, it may be transmitted on the vessel's behalf by another vessel or by any other method. The master shall ensure that information transmitted to radio stations is passed on in writing to the relevant authorities.

# ANNEX V

## SOUTH EAST ATLANTIC FISHERIES ORGANISATION SEAFO

### REPORT OF AT SEA INSPECTION

(Inspector: Please use BLOCK CAPITAL LETTERS)

Note to master of the vessel to be inspected

In accordance with SEAFO System Article 15, the Inspector is entitled to inspect and measure all fishing gear on or near the working deck and readily available for use and the catch on and/or below decks and any relevant documents. The inspection will be to check your compliance with SEAFO’s measures to which your country has not objected and, notwithstanding any such objection, to inspect the logbook entries and fishing records for the Convention Area and the catches on board. The Inspector is authorised to examine and photograph the vessel’s gear, catch, logbook or other relevant documents. The information provided during the course of this inspection will be made available to the SEAFO Secretariat and the flag State. Should an alleged infringement be detected this report will also be circulated to all Contracting Parties. All information contained in this report will be considered within the SEAFO rules of confidentiality.

1. INSPECTOR(s)

1.a

Name

Nationality

	Name	Nationality
1.		
2.		
3.		

1.b Name and identifying letters and/or number of vessel carrying the Inspector .....  
.....

2. INFORMATION ON VESSEL INSPECTED

2.a Vessel’s name and registration number .....

2.b Country and port of registration .....

2.c International radio call sign .....

2.d Type of vessel (fishing, research) .....

2.e Tonnage: GT ..... NRT.....

2.f Master’s name .....

2.g Owner’s name and address .....  
.....

3. DESCRIPTION OF ACTIVITY IN WHICH THE VESSEL WAS ENGAGED

	When Sighted:	When Boarded:
Vessel activity:		

[ Steaming, setting gear, hauling gear, towing gear, stationary, transshipping, other (specify)]

4. DETAILS OF INSPECTION

4.a Date ..... Time arrived on board ..... UTC

4.b Opinions of the master and inspector regarding the position of the vessel:

	Time (UTC)	Latitude		Longitude		Equipment used in Determining Position, e.g. GPS	SEAFO Area, Subarea or Division
		Deg.	Min.	Deg.	Min.		
Master							
Inspector							

4.c Type of fishing gear in current or recent use (e.g. trawling, longlining, traps) .....

4.d Target species .....

4.e Current control and conservation measures applicable, in the opinion of the inspector, to this fishery:

Reference Number/Article	Summary Title
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11	
12	





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7.3 Master's Statement .....  
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8. COMPLETION OF INSPECTION

8.1 Date ..... Time of departure .....UTC

8.2 Signature of Inspector in Charge .....  
Name (Please use BLOCK CAPITAL LETTERS) .....

8.3 Signature of Second Inspector .....  
Name (Please use BLOCK CAPITAL LETTERS) .....

8.4 Acknowledgment and receipt of report:

I, the undersigned, master of the vessel ....., hereby confirm that a copy of this report has been delivered to me on this date. My signature does not constitute acceptance of any part of the contents of the report.

Date and Time .....

Signature of master .....

Name (Please use BLOCK CAPITAL LETTERS)



## ANNEX VI

## INFORMATION TO BE PROVIDED IN ADVANCE BY FOREIGN VESSELS REQUESTING PORT ENTRY

<b>1. Intended port of call</b>										
<b>2. Port State</b>										
<b>3. Estimated date and time of arrival</b>										
<b>4. Purpose(s)</b>										
<b>5. Port and date of last port call</b>										
<b>6. Name of the vessel</b>										
<b>7. Flag State</b>										
<b>8. Type of vessel</b>										
<b>9. International Radio Call Sign</b>										
<b>10. Vessel contact information</b>										
<b>11. Vessel owner(s)</b>										
<b>12. Certificate of registry ID</b>										
<b>13. IMO ship ID, if available</b>										
<b>14. External ID, if available</b>										
<b>15. SEAFO ID, if applicable</b>										
<b>16. VMS</b>		No			Yes: National		Yes: SEAFO		Type:	
<b>17. Vessel dimensions</b>			Length		Beam		Draft			
<b>18. Vessel master name and nationality</b>										
<b>19. Relevant fishing authorization(s)</b>										
<i>Identifier</i>	<i>Issued by</i>	<i>Validity</i>	<i>Fishing area(s)</i>	<i>Species</i>	<i>Gear</i>					
<b>20. Relevant transshipment authorization(s)</b>										
<i>Identifier</i>		<i>Issued by</i>		<i>Validity</i>						
<i>Identifier</i>		<i>Issued by</i>		<i>Validity</i>						
<b>21. Transshipment authorizations concerning donor vessels</b>										
<i>Date</i>	<i>Location</i>	<i>Name</i>	<i>Flag State</i>	<i>ID no.</i>	<i>Species</i>	<i>Product form</i>	<i>Catch area</i>	<i>Quantity</i>		
<b>22. Total catch onboard</b>							<b>23. Catch to be offloaded</b>			
<i>Species</i>	<i>Product form</i>	<i>Catch area</i>	<i>Quantity, Conversion factor and Live weight</i>			<i>Quantity</i>				

## ANNEX VII

### GUIDELINES FOR THE TRAINING OF INSPECTORS

Elements of a training program for port State inspectors should include at least the following areas:

1. Ethics;
2. Health, safety and security issues;
3. Applicable national laws and regulations, areas of competence and conservation and management measures of SEAFO, and applicable international law;
4. Collection, evaluation and preservation of evidence;
5. General inspection procedures such as report writing and interview techniques;
6. Analysis of information, such as logbooks, electronic documentation and vessel history (name, ownership and flag State), required for the validation of information given by the master of the fishing vessel;
7. Fishing vessel boarding and inspection, including hold inspections and calculation of vessel hold volumes;
8. Verification and validation of information related to landings, transshipments, processing and fishery resources remaining onboard, including utilizing conversion factors for the various species and products;
9. Identification of fish species, and the measurement of length and other biological parameters;
10. Identification of vessels and gear, and techniques for the inspection and measurement of gear;
11. Equipment and operation of VMS and other electronic tracking systems; and
12. Actions to be taken following an inspection.

## ANNEX VIII

### PORT STATE INSPECTION PROCEDURES

Inspectors shall:

- a) verify that the vessel identification documentation onboard and information relating to the owner of the vessel is true, complete and correct, including through appropriate contacts with the flag State or international records of vessels if necessary;
- b) verify that the vessel's flag and markings (e.g. name, external registration number, International Maritime Organization (IMO) ship identification number, international radio call sign and other markings, main dimensions) are consistent with information contained in the documentation;
- c) verify that the authorizations for fishing and fishing related activities are true, complete, correct and consistent with the information provided in accordance with Annex VI;
- d) review all other relevant documentation and records held onboard, including, to the extent possible, those in electronic format and vessel monitoring system (VMS) data from the flag State or SEAFO. Relevant documentation may include logbooks, catch, transshipment and trade documents, crew lists, stowage plans and drawings, descriptions of holds, and documents required pursuant to the Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- e) examine all relevant areas, fishing gear onboard, including any gear stowed out of sight as well as related devices, and to the extent possible, verify that they are in conformity with the conditions of the authorizations. The fishing gear shall, to the extent possible, also be checked to ensure that features such as the mesh and twine size, devices and attachments, dimensions and configuration of nets, pots, dredges, hook sizes and numbers are in conformity with applicable regulations and that the markings correspond to those authorized for the vessel;
- f) determine whether the fishery resources on board was harvested in accordance with the applicable authorizations;
- g) examine the fishery resources, including by sampling, to determine its quantity and composition. In doing so, inspectors may open containers where the fishery resources have been pre-packed and move the catch or containers to ascertain the integrity of holds. Such examination may include inspections of product type and determination of nominal weight;
- h) evaluate whether there is clear evidence for believing that a vessel has engaged in IUU fishing or fishing related activities in support of such fishing;
- i) provide the master of the vessel with the report containing the result of the inspection, including possible measures that could be taken, to be signed by the inspector and the master. The master's signature on the report shall serve only as acknowledgment of the receipt of a copy of the report. The master shall be given the opportunity to add any comments or objection to the report, and, as appropriate, to contact the relevant authorities of the flag State in particular where the master has serious difficulties in understanding the content of the report. A copy of the report shall be provided to the master; and
- j) arrange, where necessary and possible, for translation of relevant documentation.



<i>Species</i>	<i>Product form</i>	<i>Catch area(s)</i>	<i>Quantity declared</i>	<i>Quantity retained</i>	<i>Difference between quantity declared and quantity determined, if any</i>
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<b>32. Examination of logbook(s) and other documentation</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>
<b>33. Compliance with applicable catch documentation scheme(s)</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>
<b>34. Compliance with applicable trade information scheme(s)</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>
<b>35. Type of gear used</b>					
<b>36. Gear examined in accordance with paragraph e) of Annex VIII</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>

<b>37. Findings by inspector(s)</b>
<b>38. Apparent infringement(s) noted including reference to relevant legal instrument(s)</b>
<b>39. Comments by the master</b>
<b>40. Action taken</b>
<b>41. Master's signature</b>
<b>42. Inspector's signature</b>

Annex 11



**South East Atlantic Fisheries Organisation**

**SEAFO**

**SYSTEM OF OBSERVATION, INSPECTION,  
COMPLIANCE AND ENFORCEMENT  
(2016)**

THE SOUTH EAST ATLANTIC FISHERIES ORGANISATION AT ITS 10<sup>th</sup> ANNUAL MEETING IN 2013 ADOPTED IN ACCORDANCE WITH ARTICLE 16 OF THE CONVENTION, THE FOLLOWING RECOMMENDATION ON A SYSTEM OF CONTROL AND ENFORCEMENT

*In accordance with Article 16 of the Convention on observation inspection compliance and enforcement, the Commission recommends that the attached SYSTEM OF OBSERVATION, INSPECTION, COMPLIANCE AND ENFORCEMENT shall enter into force on 14th February 2017*

At the same time the following SEAFO Conservation and Control Measures:

- (i) "07/06 relating to Interim Measures to amend the interim Arrangement of the SEAFO Convention";
- (j) "08/06 Establish a List of Vessels Presumed to Have Carried out Illegal, Unreported and Unregulated (IUU) Fishing Activities";
- (k) "13/09 on an Interim Prohibition of Transshipment at SEA in the SEAFO Convention Area and to regulated Transshipment in Port";
- (l) "19/10 on Retrieval of Lost Fixed Gear";
- (m) "21/11 on port State control";
- (n) "System of Observation, Inspection, Compliance and Enforcement" as entered into force on 6 February 2013; and
- (o) "System of Observation, Inspection, Compliance and Enforcement" as entered into force on 12 February 2014, is repealed.
- (p) "System of Observation, Inspection, Compliance and Enforcement" as entered into force on 15 February 2016, is repealed.

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# CHAPTER I

## General provisions

### Article 1 – Scope

Unless otherwise stated, this System of Observation, Inspection, Compliance and Enforcement, hereafter designated as the System, shall apply to all fishing vessels and fishing research vessels operating or intending to operate in the Convention Area.

### Article 2 – Definitions

2. In addition to the definitions laid down in the Convention, for the purpose of this System the following definitions shall apply:
  - (j) “Convention” means the Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean;
  - (k) “Convention Area” means the waters of the Convention Area as defined in Article 4 of the Convention;
  - (l) “fishing related activities” means any operation in support of, or in preparation for fishing, including the landing, packaging, processing, transshipping or transporting of fishery resources that have not been previously landed at a port, as well as the provisioning of personnel, fuel, gear and other supplies at sea;
  - (m) “foreign vessel” means a vessel flying the flag of another Contracting Party;
  - (n) “illegal, unreported and unregulated fishing” refers to the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, and includes fishing related activities in support of such fishing, hereinafter referred to as IUU fishing;
  - (o) “non-Contracting Party vessel” means any vessel not flagged to a Contracting Party of SEAFO, including vessels for which there are reasonable grounds for suspecting them to be without nationality;
  - (p) “patrol vessel” means any ship clearly marked and identifiable as being on Government service and authorized to carry out inspections and related MCS operations/activities to ensure compliance with SEAFO Conservation and Management Measures.
  - (q) “port” includes offshore terminals and other installations for landing, transshipping, packaging, processing, refuelling or resupplying; and
  - (r) “vessel” means fishing vessel and fishing research vessel.

### **Article 3 – Co-operation and contact points**

3. Contracting Parties shall consult, co-operate and exchange information with other Contracting Parties and/or the Executive Secretary in order to facilitate the implementation of this System, taking into account the appropriate confidentiality requirements.
  
4. Contracting Parties shall designate the competent authority which shall act as the contact point for the purposes of receiving reports in accordance with Articles 11, 13, 14, 17, 23 and 24 and for receiving notifications and issuing authorisations in accordance with Articles 21 and 22. Each Contracting Party shall send to the Executive Secretary the telephone number, e-mail address and fax number of at least two designated contact points before March 15, 2013. Any subsequent changes to the list shall be notified to the Executive Secretary at least fifteen days before the change shall come into force. The Executive Secretary shall put the details of the contact points and any changes thereto on the SEAFO website without delay.

## CHAPTER II

### Control measures

#### Article 4 – Authorisation and notification to fish

8. Each Contracting Party shall submit electronically and annually to the Executive Secretary, by 1 January, the list of its vessels that are authorised to operate in the Convention Area. This list shall include the following information:
  - (o) name of vessel, registration number, previous names (if known), and port of registry;
  - (p) previous flag (if any);
  - (q) International Radio Call Sign;
  - (r) IMO number<sup>1</sup>
  - (s) name and address of owner or owners;
  - (t) where and when built;
  - (u) type of vessel;
  - (v) length;
  - (w) name and address of operator (manager) or operators (managers) (if any);
  - (x) type of fishing method or methods;
  - (y) moulded depth;
  - (z) beam;
  - (aa) gross tonnage; and
  - (bb) power of main engine or engines.
9. Each Contracting Party shall promptly notify, after the establishment of the SEAFO record, the Executive Secretary of any addition to, any deletion from and/or any modification of the SEAFO record at any time such changes occur.
10. The Executive Secretary shall maintain the SEAFO record, and take any measure to ensure publicity of the record and through electronic means, including placing it on the SEAFO website, in a manner consistent with confidentiality requirements noted by Contracting Parties.

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<sup>1</sup> Deadline for implementation is 1<sup>st</sup> Jan 2017

11. Each Contracting Party shall:

- (g) authorise their vessels to operate in the Convention Area only if they are able to fulfil in respect of these vessels the requirements and responsibilities under the Convention, this System and its conservation and management measures;
- (h) take necessary measures to ensure that their vessels comply with this System and all the relevant SEAFO conservation and management measures;
- (i) take necessary measures to ensure that their vessels on the SEAFO record keep on board valid certificates of vessel registration and valid authorisation to fish and/or tranship;
- (j) ensure that its vessels on the SEAFO record have no history of IUU fishing, if those vessels have such history, the new owners have provided sufficient evidence demonstrating that the previous owners and operators have no legal, beneficial or financial interest in, or control over those vessels, or that having taken into account all relevant facts, its vessels are not engaged in or associated with IUU fishing;
- (k) ensure, to the extent possible under domestic law, that the owners and operators of its registered vessels on the SEAFO record are not engaged in or associated with fishing activities conducted in the Convention Area by vessels not registered into the SEAFO record; and
- (l) take necessary measures to ensure, to the extent possible under domestic law, that the owners of the vessels on the SEAFO record are citizens or legal entities within that Contracting Party so that any control or punitive actions can be effectively taken against them.

12. Each Contracting Party shall review their own internal actions and measures taken pursuant to Article 4, including punitive actions and sanctions and in a manner consistent with domestic law as regards disclosure, report the results of the review to the Commission at its annual meetings. In consideration of the results of such review, the Commission shall, if appropriate, request the Contracting Party with vessels on the SEAFO record to take further action to enhance compliance by those vessels to this System and the SEAFO conservation and management measures.

13. Each Contracting Party shall take measures, under their applicable legislation, to prohibit the fishing and fishing related activities on fishery resources covered by the Convention by the vessels which are not registered into the SEAFO record.

14. Each Contracting Party shall notify the Executive Secretary of any factual information showing that there are reasonable grounds for suspecting vessels not registered on the SEAFO record to be operating in the Convention Area.

## Article 5 – Prohibition of transhipments in the Convention Area

Each Contracting Party shall ensure that its vessels are not involved in transhipment in the Convention Area on fishery resources covered by the Convention

## Article 6 – Vessel requirements

3. Each Contracting Party shall ensure that:

(d) its vessels carry on board documents issued and certified by the competent authority of that Contracting Party, including, as a minimum, the following:

- x. registration document;
- xi. license, permit or authorisation to fish or to engage in research fishing activities and terms and conditions attached to the licence, permit or authorisation;
- xii. vessel name;
- xiii. port in which registered, and the number(s) under which registered;
- xiv. International Radio Call Sign (if any);
- xv. names and addresses of owner(s) and where relevant, the charterer;
- xvi. overall length;
- xvii. power of main engine or engines in KW/horsepower; and
- xviii. certified drawings or description of all fish holds, including storage capacity in cubic feet or metres.

(e) above documents are checked on a regular basis; and

(f) any modification to the documents referred to in subparagraph (a) is certified by the competent authority of that Contracting Party.

4. Each Contracting Party shall ensure that its vessels authorised to operate in the Convention Area are marked in such a way that they can be readily identified with generally accepted international standards, such as the FAO Standard Specification for the Marking and Identification of Fishing Vessels.

## Article 7 – Marking of gear

Each Contracting Party shall ensure that gears used by its vessels authorised to operate in the Convention Area are marked as follows: the ends of nets, lines and gear anchored in the sea shall be fitted with flag or radar reflector buoys by day and light buoys by night sufficient to indicate their position and extent. Such lights should be visible at a distance of at least two nautical miles in good visibility. Marker buoys and similar objects floating on the surface and intended to indicate the location of fixed fishing gear shall be clearly marked at all times with the letter(s) and/or number(s) of the vessel to which they belong.

## Article 8 – Retrieval of lost or abandoned fishing gear

Each Contracting Party shall ensure that:

- (g) vessels operating with any gear shall have equipment on board to retrieve lost or abandoned gear;
- (h) a vessel that has lost or abandoned gear shall make every reasonable attempt to retrieve it as soon as possible;
- (i) no vessel shall deliberately abandon fishing gear, except for safety reasons, notably vessels in distress and/or life in danger; and
- (j) if the lost gear cannot be retrieved the vessel shall notify the competent authorities of its flag State within 24 hours of the following:
  - vii. the name and call sign of the vessel;
  - viii. the type of lost gear;
  - ix. the quantity of gear lost;
  - x. the time when the gear was lost;
  - xi. the position where the gear was lost; and
  - xii. measures taken by the vessel to retrieve lost gear.
- (k) following retrieval of lost gear, the vessel shall notify the flag State Contracting Party within 24 hours of the following:
  - vii. the name and call sign of the vessel that has retrieved the gear;
  - viii. the name and call sign of the vessel that lost the gear (if known);
  - ix. the type of gear retrieved;
  - x. the quantity of gear retrieved;

- xi. the time when the gear was retrieved; and
  - xii. the position where the gear was retrieved.
- (l) The flag State shall without delay notify the Executive Secretary of the information referred to in paragraphs (d) and (e). The Executive Secretary shall without delay put this information on the SEAFO website.

## **Article 9 – Labelling of frozen products of fishery resources**

Each Contracting Party shall ensure that:

- (e) when frozen, all fishery products caught and retained onboard within the Convention Area shall be identified by a clearly legible label or stamp. The label or stamp, on each box, carton, container, bag or block of frozen fishery products, shall indicate the species (using the relevant FAO 3-Alpha code), presentation, production date, the SEAFO Division where the catch was taken and the name of the catching vessel;
- (f) labels shall be securely affixed, stamped or written on packaging at the time of stowage and be of a size that can be clearly read by inspectors in the normal course of their duties;
- (g) labels shall be marked in ink on a contrasting background; and
- (h) each package shall contain only:
  - v. one product form/type category;
  - vi. one division of capture;
  - vii. one date of production; and
  - viii. one species.

## CHAPTER III

### Monitoring of Fisheries

#### Article 10 - Information on fishing activities

5. Each Contracting Party shall ensure that its vessels keep a bound fishing logbook with consecutively numbered pages and, where appropriate, a production logbook, stowage plan or a research plan and that the fishing logbook contains the following:
  - (e) each entry into and exit from the Convention Area;
  - (f) the cumulative catches by species (using the relevant FAO 3 Alpha Code) by live weight (Kg), the proportion of the catch by live weight (Kg) retained on board, including retained by-catch species and discarded TAC species; and
  - (g) for each haul:
    - vii. catch retained on board by species in live weight (Kg) and an estimation of the amount of fishery resources discarded (Kg), by species;
    - viii. all non TAC species discarded for which the total live weight is less than 10 kg, may be reported using the 3-Alpha Code MZZ (Miscellaneous Marine Species);
    - ix. the type of gear (trawl, pots, longline, etc.);
    - x. the description of gear (number of hooks, number of pots, size of the trawl, etc.);
    - xi. the longitude and latitude co-ordinates of shooting and hauling; and
    - xii. the date and time of shooting and hauling (UTC).
  - (h) after each report, pursuant to article 11 and 13 (f), the following details shall be entered in the logbook immediately:
    - iii. date and time (UTC) of transmission of the report; and
    - iv. in the case of a radio transmission, the name of the radio station through which the report is transmitted.
6. Each Contracting Party shall ensure that its vessels:
  - (c) submit the fishing logbook data within 30 days of the completion of a fishing trip in the convention Area; and
  - (d) submit the fishing logbook data to the Secretariat in the electronic format as provided in the Reporting Forms section on the SEAFO website.
7. Each Contracting Party shall ensure that its vessels, which process and/or freeze their catch shall:



- (c) record their cumulative production by species (using the relevant FAO 3-Alpha Code), by live weight (Kg), including by-catch and product form/type in a production logbook; and/or
  - (d) stow in the hold all processed catch in such a way that the location of each species can be identified from a stowage plan maintained by the vessel.
8. The quantities recorded shall correspond to the quantities kept on board. The original recordings contained in the fishing logbooks shall be kept on board the vessel for a period of at least 12 months.

### **Article 11 – Communication of catches by vessels**

2. Each Contracting Party shall ensure that its vessels authorised to operate in the Convention Area shall communicate catch reports to its FMC in accordance with the specifications set out in Annex II A by electronic means, or other appropriate means. The timing and content of the reports shall include the following:
- (d) entry report (COE). This report shall be transmitted no more than 12 hours and at least 6 hours in advance of each entry into the Convention Area and shall include entering date, time, geographical position of the vessel and the quantity of fishery resources on board by species (using the relevant FAO 3-Alpha Code) and by live weight (Kg);
  - (e) catch report (CAT). The aggregated catch for consecutive 5 days shall be recorded by division, by species (using the relevant FAO 3 Alpha Code) and by live weight (Kg), including retained by-catch species and discarded TAC species, every 5 days, or more frequently as required by the Contracting Party. Nil catch retained and nil discards of all species shall be reported using the 3-Alpha Code MZZ and quantity as “0”; and
  - (f) exit report (COX). This report shall be made no more than 12 hours and at least 6 hours in advance of each exit from the Convention Area. The report shall include exiting date, time, geographical position of the vessel, the number of fishing days and the catch taken by species (using the relevant FAO 3-Alpha Code) and by live weight (Kg) since the commencement of fishing in the Convention Area, or since the last catch report.
3. Each Contracting party shall ensure that its FMC upon receipt, transmits electronically the reports referred to in paragraph 1 to the Executive Secretary in the format prescribed in Annex II A without delay.

### **Article 12 – Periodic reporting of catch and fishing effort by Contracting Parties**

3. Each Contracting Party shall report to the Executive Secretary the aggregated retained and discarded catch of fishery resources listed in Annex I, and by-catch species, in accordance with the specifications and format set out in Annex II B attached, in kilograms per species, taken by its vessels in the Convention Area on a quarterly basis. Such reports shall specify the months to which each report refers and shall be submitted within 30 days following the end of the quarter in which the fishing occurred.
4. The Executive Secretary shall, within 15 days following the quarterly deadlines for receipt of the provisional catch statistics, collate the information received and circulate it to the Contracting Parties.

### **Article 13 – Vessel Monitoring System (VMS)**

4. Each Contracting Party shall ensure that its vessels implement a satellite based vessel monitoring system and:
  - (g) be equipped with a Vessel Locating Device (VLD) able to automatically transmit VMS data to the land based Fisheries Monitoring Centre (FMC) of its flag State allowing a continuous tracking of the position of the vessel by the flag State;
    - 1.
  - (h) the VLD fitted on board the vessel shall be able to continuously collect and transmit, at any time, to the FMC of the flag State the following data:
    2.
      - vi. the vessel's identification;
      - vii. the most recent geographical position of the vessel (longitude and latitude) with a margin of error lower than 500 metres, with a confidence interval of 99%;
      - viii. course of the vessel;
      - ix. speed of the vessel; and
      - x. the date and time that the position of the vessel has been transmitted.
  - (i) the satellite tracking devices on its vessels are permanently operational and that the information referred to in sub-paragraph (b) is collected and automatically transmitted at least every 2 hours;
  - (j) its vessels do not enter the Convention Area and commence operations with a defective VLD;
  - (k) in the event of a technical failure or non-operation of the VLD fitted on board a vessel, the device shall be repaired or replaced within a month. After this period, the vessel is not authorised to begin a new trip with a defective VLD. If the trip is lasting more than one month, the repair or the replacement has to take place as soon as the vessel enters a port; the vessel shall not be authorised to begin a new trip without a VLD having been repaired or replaced; and

- (l) that a vessel with a defective VLD shall manually communicate to the flag State FMC, at least daily, reports containing the information in sub-paragraph (b) by other means of communication (email, radio, fax, etc.).
5. Each flag State shall provide a copy of the reports required in accordance with this Article to the Executive Secretary, as soon as possible after receipt, but not later than 24 hours following the receipt of the reports and messages by the FMC.
6. Each flag State shall ensure that the reports and messages transmitted to the Executive Secretary shall be in accordance with the data exchange format in Annex III.

#### **Article 14 – Monitoring of transshipments in ports**

5. Each Contracting Party shall ensure that its vessels carrying fishery resources caught and covered by the Convention in the Convention Area shall only tranship in port of a Contracting Party if they have prior authorisation from both its flag State and the port. Each Contracting Party shall further ensure that transshipments are consistent with the reported catch of each vessel and require the reporting of transhipment in accordance with the format set out in Annex IV.
6. Each flag State shall ensure its vessels which tranships in port to another vessel, hereinafter referred to as “the receiving vessel”, any quantity of catches of fishery resources covered by the Convention and fished in the Convention Area shall, at the time of the transhipment inform the flag State of the receiving vessel of the fishery resources and quantities involved, of the date of the transhipment and the location of catches. The vessel shall submit to its flag State a SEAFO transhipment declaration in accordance with the format set out in Annex IV. The vessel shall notify, at least 24 hours in advance, the following information to the port State:
  - (e) the date, time and port of transhipment;
  - (f) the names of the transshipping vessels;
  - (g) the names of the receiving vessels; and
  - (h) the tonnage of fishery resources by species to be transhipped.
7. Each flag State shall ensure its vessels, not later than 24 hours before the beginning of the transhipment, and at the end of a transhipment, the receiving vessel shall inform the competent authorities of the port state, of the quantities of catches by species of fishery resources covered by the Convention on board the vessel. The vessel shall transmit the SEAFO transhipment declaration to the competent authorities within 24 hours. The receiving vessel shall, 48 hours before landing, submit a SEAFO transhipment declaration to the competent authorities of the port State where the landing takes place.
8. Each Contracting Party involved in the transhipment shall take the appropriate measures to verify the accuracy of the information received and shall cooperate with the flag State referred in paragraph 1 to ensure that landings are consistent with the reported catches

of each vessel. Each Contracting Party shall notify annually to SEAFO the details of transshipments by its vessels in accordance with paragraphs 1, 2, and 3.

## **CHAPTER IV**

### **At sea inspection**

#### **Article 15 – Scope and application**

Until a SEAFO sea inspection programme has been adopted, each Contracting Party undertaking inspections by its patrol vessels at sea on a vessel operating, or suspected of operating, on fishery resources covered by the Convention in the Convention Area, will do so by applying the relevant provisions in part VI of the United Nations Fish Stocks Agreement, that came into force 11 November 2001.

#### **Article 16 – Notification to inspect at sea**

4. Each Contracting Party shall, no later than 30 days prior to commencement of the initial sea inspection, notify the Executive Secretary of:
  - (a) the provisional plan, names of inspectors and inspector trainees and the name, radio call sign and communication contact information of each inspection vessel it has assigned to sea inspection duties applying the provisions provided in Article 15; and
  - (b) any changes to the particulars so notified prior to subsequent sea inspections.
5. Upon receiving such information, the Executive Secretary shall post the information received from Contracting Parties on the secure part of the SEAFO website.
6. Each Contracting Party may request information from the Executive Secretary regarding fishing within the Convention Area to assist with the co-ordination of their deployment of resources for sea inspection purposes.

#### **Article 17 – At sea inspection reports and procedures**

5. Inspectors shall complete the approved SEAFO inspection report form as provided in Annex V, and apply the following procedures:
  - (a) the inspector shall provide a written explanation, on the inspection report form, of any alleged violation of SEAFO measures. The inspector shall allow the master of the vessel being inspected to comment, on the inspection report form, about any aspect of the inspection;

(b) the inspector shall sign the inspection report form. The master of the inspected vessel shall be invited to sign the inspection report form to acknowledge receipt of the report;

(c) before leaving the vessel that has been inspected, the inspector shall give the master of that vessel a copy of the completed inspection form; and

(d) the inspector shall provide a copy of the completed inspection form along with photographs and video footage to the competent authority of the inspecting Contracting Party not later than 15 days of arrival into port.

6. The inspecting Contracting Party shall forward a copy of the inspection form in electronic format not later than 15 days from its reception along with two copies of photographs and video footage to the Executive Secretary who shall forward one copy of this material to the flag State of the inspected vessel not later than seven days from receipt.
7. Fifteen days after the transmission of the completed inspection form to the flag State, the Executive Secretary shall, in the case where an alleged infringement is detected, transmit that form to all Contracting Parties together with comments or observations, if any, received from the flag State.
8. Any supplementary reports or information shall be provided to the Executive Secretary. The Executive Secretary shall provide such reports or information to the flag State of the vessel, which shall then be afforded 15 days to comment. In the case where an alleged infringement is detected, all supplementary reports or information provided, and any comments received from the flag State of the vessel, if any, shall be forwarded to all Contracting Parties, by the Executive Secretary, without delay.

## CHAPTER V

### Observer Programme

#### Article 18 – Scientific observer programme

3. Each Contracting Party shall ensure that all its vessels operating in the Convention Area shall carry scientific observers qualified by the flag State. Flag States shall ensure that the relevant data is transmitted to Executive Secretary in the format specified by the Scientific Committee using the scientific observer forms and report template as provided in the Reporting Forms section on the SEAFO website.
4. Each Contracting Party shall require the submission of this information, in respect of each vessel flying its flag, within 30 days of leaving the Convention Area. The Contracting Party shall provide a copy of the information to the Executive Secretary as soon as possible, taking account of the need to maintain confidentiality of non-aggregated data.

## CHAPTER VI

### Port State control

#### Article 19 – Scope

Each Contracting Party shall, in accordance with duties under article 15 of the SEAFO Convention maintain an effective system of port State control for all vessels that have been engaged in fishing or fishing related activities in the Convention Area, except container vessels that are not carrying fishery resources or, if carrying fishery resources, only fishery resources that have been previously landed, provided that there are no clear grounds for suspecting that such a vessel has engaged in fishing related activities in support of IUU fishing.

#### Article 20 - Designation of ports

4. Each Contracting Party shall designate, publicize and notify the Executive Secretary about the ports to which foreign vessels may request entry.
5. Each Contracting Party shall, to the greatest extent possible, ensure that designated ports have sufficient capacity to conduct inspections and take other measures in accordance with obligations set out by SEAFO.
6. The Executive Secretary shall establish a register of all ports designated by Contracting Parties. The register shall include accompanying information, such as associated conditions of entry and the period of notice required, and shall be published, and updated as required, on the SEAFO website.

#### Article 21 – Advance request for port entry of foreign vessels

Each Contracting Party shall, before granting entry to a foreign vessel to its port, as a minimum standard, require the information set out in Annex VI to be provided at least 48 hours before the estimated time of arrival. A Contracting Party may provide for another notification period, taking into account, *inter alia*, the distance between the fishing grounds and its ports. In such a case the Contracting Party concerned shall without delay inform the Executive Secretary, who shall put this information on the SEAFO website. Any other subsequent changes to the requirements shall be notified to the Executive Secretary at least 30 days before the changes becomes effective.

#### Article 22 – Port entry; authorisation or denial of foreign vessels

7. After receiving the information required pursuant to Article 21, as well as such other information as it may require to determine whether the vessel requesting entry into its port has engaged in IUU fishing, each Contracting Party shall decide whether to authorise or deny the entry of the vessel into its port and shall communicate this decision to the master of the vessel or to the vessel's representative.



8. In the case of authorization of entry, the master of the vessel or the vessel's representative shall be required to present the authorisation for entry to the competent authorities of the Contracting Party upon the vessel's arrival at port.
9. In the case of denial of entry, the Contracting Party shall communicate its decision taken pursuant to paragraph 1 of this Article to the flag State of the vessel and to the Executive Secretary, who shall put this information on the SEAFO website.
10. Without prejudice to paragraph 1 of this Article, when a Contracting Party has sufficient proof that a vessel seeking entry into its port has engaged in IUU fishing, in particular the inclusion of a vessel on a list of vessels having engaged in such fishing or fishing related activities adopted by SEAFO or another relevant regional fisheries management organisation, the Contracting Party shall deny that vessel entry into its ports.
11. In addition to paragraphs 3 and 4 of this Article, a Contracting Party may allow entry into its ports of a vessel referred to in those paragraphs exclusively for the purpose of inspecting it and taking other appropriate actions in conformity with international law which are at least as effective as denial of port entry in preventing, deterring and eliminating IUU fishing.
12. Where a vessel referred to in paragraph 4 or 5 of this Article is in port for any reason, a Contracting Party shall deny such vessel the use of its ports for landing, transshipping, packaging, and processing of fishery resources and for other port services including, *inter alia*, refuelling and resupplying, maintenance and dry-docking. Paragraphs 2 and 3 of Article 23 apply *mutatis mutandis* in such cases.

### **Article 23 – Use of ports by foreign vessels**

4. Where a vessel has entered one of its ports, a Contracting Party shall deny that vessel the use of the port for landing, transshipping, packaging and processing of fishery resources that have not been previously landed and for other port services, including, *inter alia*, refuelling and resupplying, maintenance and dry-docking, if:
  - (d) the Contracting Party finds that the vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by its flag State;
  - (e) the flag State does not confirm within a reasonable period of time, on the request of the port State, that the fishery resources on board was taken in accordance with applicable requirements of SEAFO; or
  - (f) the Contracting Party has reasonable grounds to believe that the vessel was otherwise engaged in IUU fishing, including in support of a vessel referred to in paragraph 4 of Article 22, unless the vessel can prove:
    - iii. that it was acting in a manner consistent with relevant conservation and management measures; or

- iv. in the case of provision of personnel, fuel, gear and other supplies at sea, that the vessel that was provisioned was not, at the time of provisioning, a vessel referred to in paragraph 4 of Article 22.
5. In addition to paragraph 1 of this Article, a Contracting Party shall not deny a vessel referred to in that paragraph the use of port services:
  - (c) essential to the safety or health of the crew or the safety of the vessel, provided these needs are duly proven; or
  - (d) where appropriate, for the scrapping of the vessel.
6. Where a Contracting Party has denied the use of its port in accordance with this Article, it shall promptly notify the flag State and the Executive Secretary, who shall put this information on the SEAFO website.

## **Article 24 – Inspections**

8. Each Contracting Party shall ensure that inspections of vessels are carried out by authorised inspectors trained and familiar with the Convention and relevant conservation and management measures adopted by the Commission. Inspector training programs shall take into account the elements set out in Annex VII, and Contracting Parties shall seek to cooperate in this regards.
9. Prior to an inspection, the inspector shall present to the master of the vessel an appropriate identity document.
10. Each Contracting Party shall ensure that inspections of vessels in their ports are carried out at least in accordance with the procedures set out in Annex VIII.
11. The port State may invite inspectors of other Contracting Parties to accompany their own inspectors and observe the inspection of landings or transshipment operations of fishery resources caught by foreign vessels.
12. Each Contracting Party shall ensure that their inspectors make all possible efforts to avoid unduly delaying a vessel and that the vessel suffers the minimum interference and inconvenience, and that degradation of the quality of the fish resources is avoided.
13. On completion of the inspection, the port Contracting Party inspector shall provide the Master of the foreign fishing vessel with the inspection report containing the findings of the inspection, including possible subsequent measures that could be taken by the port Contracting Party. The Master shall be given the opportunity to add any comments or objection to the report and to contact the flag State. The inspector and the Master shall sign the report and a copy of the report shall be provided to the Master. The Master's signature shall serve only as acknowledgement of the receipt of a copy of the report.
14. The port Contracting Party shall transmit a copy of the inspection report to the SEAFO Secretariat no later than 14 days following the date of completion of the inspection. If the inspection report cannot be transmitted within 14 days, the port Contracting Party should notify the SEAFO Secretariat within the 14 day time period the reasons for the delay and

when the report will be submitted. The report will also include the information set out in Annex IX.

### **Article 24 bis - Procedure in the event of apparent infringements**

1. If the information collected during the inspection provides evidence that a foreign fishing vessel has committed an apparent infringement of the SEAFO conservation and management measures, the inspector shall:

- a) record the apparent infringement in the inspection report;
- b) transmit the inspection report to the port Contracting Party competent authority, which shall promptly forward a copy to the SEAFO Secretariat and to the flag State point of contact and, as appropriate, the relevant coastal State;
- c) to the extent practicable, ensure safekeeping of the evidence pertaining to such apparent infringement. If the infringement is to be referred to the flag State for further action, the port Contracting Party shall promptly provide the evidence collected to the flag State.

2. If the apparent infringement falls within the legal jurisdiction of the port Contracting Party, the port Contracting Party may take action in accordance with its domestic laws. The port Contracting Party shall promptly notify the action taken to the flag State, the relevant coastal State, as applicable, and the SEAFO Secretariat, which shall promptly publish this information in a secured part of the SEAFO website.

3. Apparent infringements that do not fall within the jurisdiction of the port Contracting Party, and apparent infringements referred to in Article 24 bis 2 for which the port Contracting Party has not taken action, shall be referred to the flag State and, as appropriate, the relevant coastal State. Upon receiving the copy of the inspection report and evidence, the flag Contracting Party shall promptly investigate the infringement and notify the SEAFO Secretariat of the status of the investigation and of any enforcement action that may have been taken within 6 months of such receipt. If the flag Contracting Party cannot notify the SEAFO Secretariat this status report within 6 months of such receipt, the flag Contracting Party should notify the SEAFO Secretariat within the 6 month time period the reasons for the delay and when the status report will be submitted. The SEAFO Secretariat shall promptly publish this information in a secured part of the SEAFO website. Contracting Party shall report to the Secretariat the information regarding the status of such investigations.

4. Should the inspection provide evidence that the inspected vessel has engaged in IUU activities as referred to in Article 28.4, the port Contracting Party shall promptly report the case to the flag State, and the relevant coastal Contracting Party, as applicable, and notify as soon as possible the SEAFO Secretariat, along with its supporting evidence, for the purpose of inclusion of the vessel in the draft IUU list.

### **Article 25 – Role of flag State**

5. Each Contracting Party shall require its vessels to cooperate with the port State in inspections carried out pursuant to this regulation.
6. When a Contracting Party has clear grounds to believe that one of its vessels has engaged in IUU fishing and is seeking entry to or is in the port of another Contracting Party, it shall, as appropriate, request that Contracting Party to inspect the vessel or to take other adequate measures.
7. Where, following port State inspection, a flag State receives an inspection report indicating that there are clear grounds to believe that a vessel entitled to fly its flag has engaged in IUU fishing, it shall immediately and fully investigate the matter and shall, upon sufficient evidence, take enforcement action without delay in accordance with its laws and regulations.
8. Each Contracting Party shall, in its capacity as a flag State, report to the Executive Secretary on actions it has taken in respect of its vessels that, as a result of port State measures taken pursuant to this Chapter, have been determined to have engaged in IUU fishing.

#### **Article 26 – Application**

3. This Chapter shall be applied to all Contracting Party's ports; within the coastal States, which have areas of national jurisdiction adjacent to the Convention Area.
4. Each Contracting Party which does not have areas of national jurisdiction adjacent to the Convention Area shall endeavour to apply this Chapter.

## CHAPTER VII

### Measures to promote compliance

#### Article 27 – Sightings and identifications of non-contracting party vessels

3. Each Contracting Party shall ensure that its vessels report information to its flag State on any possible fishing and fishing related activities by vessels flying the flag of a non-contracting party in the Convention Area. This information shall contain, inter alia:
  - (f) name of the vessel;
  - (g) registration number of the vessel;
  - (h) flag State of the vessel;
  - (i) date, time and position of sighting; and
  - (j) any other relevant information regarding the sighted vessel.
4. Each Contracting Party shall submit this information to the Executive Secretary as rapidly as possible. The Executive Secretary shall forward this information to the Contracting Parties for information and for consideration at the next SEAFO Annual Meeting.

## Article 28 – Listing of IUU vessels

24. Contracting Parties shall every year, and at least 120 days before the Annual Meeting of the Commission, transmit to the Executive Secretary a list of vessels presumed to be carrying out IUU activities in the Convention Area during the current and previous year, accompanied by the supporting evidence, as provided in paragraph 3, concerning the presumption of this IUU fishing.
25. At each Annual Meeting, the Commission shall identify those vessels which have engaged in fishing and fishing related activities for fishery resources covered by the Convention in a manner which is inconsistent with SEAFO conservation and management measures, and shall establish a list of such vessels (the IUU Vessel List), in accordance with the procedures and criteria set out below.
26. This identification shall be documented, *inter alia*, on reports from a Contracting Party relating to SEAFO conservation and management measures, trade information obtained on the basis of relevant trade statistics such as Food and Agriculture Organization of the United Nations (FAO) data, statistical documents and other national or international verifiable statistics, as well as any other information obtained from port States and/or gathered from the fishing grounds which is suitably documented.
27. Vessels engaged in fishing and fishing related activities for fishery resources covered by the Convention are presumed to have carried out IUU fishing in the Convention Area when a Contracting Party presents evidence that such vessels, *inter alia*:
- (k) harvest fishery resources covered by the Convention in the Convention Area and are not on the SEAFO Record of authorized vessels; or
  - (l) harvest fishery resources covered by the Convention, when its flag State is without or has exceeded its quotas, catch limit or effort allocation established by SEAFO conservation and management measures; or
  - (m) do not record or report their catches made in the Convention Area, or make false reports; or
  - (n) take or land undersized fish in contravention of SEAFO conservation and management measures; or
  - (o) fish during closures in contravention of SEAFO conservation and management measures; or
  - (p) use prohibited fishing gear in contravention of SEAFO conservation and management measures; or
  - (q) tranship with, participate in joint fishing operations with, support or re-supply vessels included in the IUU Vessel List; or
  - (r) are without nationality and harvest fishery resources covered by the Convention in the Convention Area; or

- (s) engage in fishing activities contrary to any other SEAFO conservation and management measures; or
- (t) are under the control of the owner of any vessel on the SEAFO IUU Vessel List.

### ***Draft IUU Vessel List***

- 28. On the basis of the information received pursuant to paragraph 1 and any other information at disposal, the Executive Secretary shall draw up a draft SEAFO IUU Vessel List and shall transmit it, together with all the supporting evidence provided, to all Contracting Parties, as well as to non-contracting parties with vessels on the List, at least 90 days before the Annual Meeting of the Commission.
- 29. Any comments related to paragraph 5 shall be transmitted to the Executive Secretary, at least 30 days before the Annual Meeting of the Commission, as appropriate, including verifiable evidence and other supporting information, showing that the vessels neither have operated in contravention of SEAFO conservation and management measures nor had the possibility of fishing or fishing related activities for fishery resources covered by the SEAFO Convention.
- 30. The Executive Secretary shall request each flag State with vessels on the draft IUU Vessel List to notify the owner of the vessels of their inclusion in that List, and of the consequences of their inclusion being confirmed in the IUU Vessel List.
- 31. Upon receipt of the draft IUU Vessel List, Contracting Parties shall closely monitor the vessels included in that List in order to determine their activities and possible changes of name, flag or registered owner.

### **Provisional IUU Vessel List**

- 32. On the basis of the information received pursuant to paragraph 6, the Executive Secretary shall draw up a provisional SEAFO IUU Vessel List, and transmit it, two weeks in advance of the Annual Meeting of the Commission, to the Contracting Parties and the non-contracting parties concerned, together with all the evidence provided.
- 33. Contracting Parties may at any time submit to the Executive Secretary any additional information which might be relevant for the establishment of the IUU Vessel List. The Executive Secretary shall circulate the information, together with all the evidence provided, to the Contracting Parties and to the non-contracting parties concerned, at least two weeks before the Annual Meeting of the Commission.
- 34. At each Annual Meeting, the Compliance Committee shall:
  - (c) following consideration of the draft IUU Vessel List and information and evidence circulated under paragraphs 5, 9 and 10, adopt a Provisional IUU Vessel List and submit it to the Commission for approval; and
  - (d) following consideration of the current IUU Vessel List and the information and evidence circulated under paragraph 9, recommend to the Commission which, if any, vessels should be removed from the current IUU Vessel List.

35. A vessel shall be included in the provisional IUU Vessel List only if one or more of the criteria in paragraph 4 have been satisfied.
36. The Commission shall remove a vessel from the provisional SEAFO IUU Vessel List if the vessel's flag State demonstrates that:
- (c) the vessel did not engage in any of the IUU fishing described in paragraph 4; or
  - (d) effective action has been taken in response to the IUU fishing in question, including, *inter alia*, prosecution, and imposition of sanctions of adequate severity.
37. Following the examination referred to in paragraph 11, the Commission shall approve the provisional IUU Vessel List.
38. The Draft IUU Vessel List, Provisional IUU Vessel List and the IUU Vessel List shall contain the following details for each vessel:
- (j) name and previous names, if any;
  - (k) flag and previous flags, if any;
  - (l) owner and previous owners, including beneficial owners, if any;
  - (m) operator and previous operators, if any;
  - (n) call sign and previous call signs, if any;
  - (o) IMO number, classification authority, Lloyds, etc.;
  - (p) photographs, where available;
  - (q) date first included on the IUU Vessel List; and
  - (r) summary of activities which justify inclusion of the vessel on the List, together with references to all relevant documents informing of and evidencing those activities.

### **IUU Vessel List**

39. Once the Commission adopts the IUU Vessel List, it shall request Contracting Parties and non-contracting parties with vessels on the SEAFO IUU Vessel List to:
- (c) notify the owner of the vessels of its inclusion on the IUU Vessel List and the consequences which result from being included in the List; and
  - (d) take all the necessary measures to eliminate these IUU fishing, including, if necessary, the withdrawal of the registration or the fishing licenses of these vessels, and to inform the Commission of the measures taken in this respect.
40. Contracting Parties shall take all necessary measures under their applicable legislation and pursuant to paragraphs 56 and 66 of the IPOA-IUU, to:



- (h) ensure that its vessels do not participate in any transshipment with, support or re-supply vessels on the IUU Vessel List;
  - (i) ensure that vessels on the IUU Vessel List that enter ports voluntarily are not authorized to land, tranship, refuel or re-supply therein but are inspected upon entry;
  - (j) prohibit the chartering of a vessel on the IUU Vessel List;
  - (k) refuse to grant their flag to vessels on the IUU Vessel List;
  - (l) prohibit commercial transactions, imports, landings and/or transshipment of fisheries resources covered by the Convention from vessels on the IUU Vessel List;
  - (m) encourage traders, importers, transporters and others involved, to refrain from transactions in, and transshipment of, fishery resources covered by the SEAFO Convention caught by vessels on the IUU Vessel List; and
  - (n) collect, and exchange with other Contracting Parties, any appropriate information with the aim of searching for, controlling and preventing false import/export certificates for fishery resources covered by the Convention from vessels on the IUU Vessel List.
41. The Executive Secretary shall transmit the IUU Vessel List and any relevant information regarding the list to the secretariats of the Commission for the Conservation of Antarctic Marine Resources (CCAMLR), the Northwest Atlantic Fisheries Organization (NAFO), the North East Atlantic Fisheries Commission (NEAFC) and the South Indian Ocean Fisheries Agreement (SIOFA).
42. Upon receipt of the Final IUU Vessel Lists established by the following RFMOs: CCAMLR, NAFO, NEAFC and SIOFA, any information regarding the lists, the Executive Secretary shall circulate this information to the Contracting Parties. Vessels that have been added to or deleted from the respective lists that are flagged to non-contracting parties shall be incorporated into or deleted from the SEAFO IUU Vessel List as appropriate, unless any Contracting Party objects within 30 days of the date of transmittal by the Executive Secretary on the grounds that:
- (c) there is satisfactory information to establish that any of the requirements in paragraph 13 a) or b) have been met with regard to the Final IUU Vessel List of the following RFMOs: CCAMLR, NAFO, NEAFC and SIOFA; or
  - (d) there are satisfactory information to establish that none of the requirements in paragraph 13 a) or b) have been met with regard to a vessel taken off the respective lists.
43. In the event of an objection to a vessel listed by: CCAMLR, NAFO, NEAFC and SIOFA being incorporated into or deleted from the SEAFO IUU Vessel List, such vessel shall be placed on the Provisional IUU Vessel List. Paragraphs 5 to 8 shall not apply to vessels placed on the Provisional IUU Vessel List pursuant to this paragraph.
44. The Executive Secretary shall take any measure necessary to ensure publicity of the IUU Vessel List, in a manner consistent with any applicable confidentiality requirements, including placing it on the SEAFO website. Furthermore, the Executive Secretary shall

transmit the IUU Vessel List to the FAO.

45. Without prejudice to the rights of Contracting Parties and coastal States to take proper action, consistent with international law, the Contracting Parties shall not take any unilateral trade measures or other sanctions against vessels on the draft or provisional IUU Vessel Lists, pursuant to paragraphs 5 or 9, or that have been removed from the IUU Vessel List, pursuant to paragraph 13, on the grounds that such vessels are involved in IUU fishing.

#### ***Deletion from the IUU Vessel List***

46. A Contracting Party or a non-contracting party with a vessel on the IUU Vessel List may request the removal of the vessel from the List during the intersessional period by providing information demonstrating that:
- (e) it has adopted measures that will ensure that the vessel complies with all SEAFO measures;
  - (f) it will be able to assume effectively its responsibilities as regards the monitoring and control of the vessel's fishing and fishing related activities in the Convention Area;
  - (g) it has taken effective action in response to the IUU fishing that resulted in the vessel's inclusion in the IUU Vessel List, including prosecution and imposition of sanctions of adequate severity; and
  - (h) the vessel has changed ownership and that the new owner can establish that the previous owner no longer has any legal, financial or real interests in the vessel or exercises control over it, and that the new owner has not participated in IUU fishing.

#### **Article 29 – Summary of reporting obligations**

To facilitate compliance with SEAFO data submission requirements and schedules a summary checklist of reporting obligations will be circulated to all Contracting Parties within 30 days following any changes coming into effect and will be made available on the SEAFO website.

## CHAPTER VIII

### Research

#### Article 30 – Vessels conducting fishing research

2. No less than seven days prior to the commencement of a research period, the flag State Contracting Party shall:
  - (c) notify the Executive Secretary by electronic means of any vessel it has authorised to conduct fishing research in the Convention Area; and
  - (d) provide to the Executive Secretary a fishing research plan for any vessel flying its flag it has authorised to conduct research, including the purpose, location and, for vessels engaged in research, the dates during which the vessel will be engaged as a research vessel.
9. For vessels engaged in research, the flag State Contracting Party shall immediately notify the Executive Secretary upon termination of fishing research and submit a copy of the research data to the Executive Secretary. The Executive Secretary shall ensure that the SEAFO confidentiality protocol is followed for all research data submitted.
10. Each flag State Contracting Party shall notify the Executive Secretary not less than seven days before the effective date of any changes to the fishing research plan, and shall ensure that the master of the vessel shall maintain a record of the changes on board
11. Each flag State Contracting Party shall ensure that masters of vessels flying its flag shall at all times keep on board a copy of the fishing research plan in one of the official SEAFO languages.
12. Each flag State Contracting Party shall ensure that a vessel flying its flag shall not conduct commercial fishing during the research plan period.
13. Each flag State Contracting Party shall ensure that masters of vessels flying its flag shall keep a stowage plan, updated daily, showing the location of the different species by FAO 3-Alpha Code in the holds as well as the quantities of such species on board in kilograms product weight, labelled in accordance with Article 9. The stowage plan shall be kept on board until the vessel has been unloaded completely.
14. Following notification in accordance with paragraph 1 (a), the Executive Secretary shall without delay post the names of all vessels on the SEAFO website, including with such posting any supporting documents provided by the flag State Contracting Party, including the fishing research plan and any subsequent modifications.
15. Unless otherwise provided, vessels flying the flag of a Contracting Party that are conducting fishing research shall not be restricted by SEAFO conservation measures pertaining to the harvesting of fish in the Convention Area but may be subject to sea inspections pursuant to Article 15.

## ANNEX I

### FISHERY RESOURCES

FAO 3-Alpha Code	Species	Latin Name
ALF	Alfonsino	Family Berycidae
HOM	Horse Mackerel	Trachurus spp.
MAC	Mackerel	Scomber spp.
ORY	Orange Roughy	Hoplostethus spp.
SKA	Skates	Family Rajidae
SKH	Sharks	Order Selachomorpha
EDR	Armourhead	Pseudopentaceros spp.
CDL	Cardinal Fish	Epigonus spp.
CGE	Deep-sea Red Crab	Chaceon maritae
OCZ	Octopus	Family Octopodidae
SQC	Squid Family	Loliginidae
TOP	Patagonian toothfish	Dissostichus eleginoides
HCK	Hake Merluccius	Spp.
WRF	Wreckfish	Polyprion americanus
ORD	Oreo dories	Family Oreosomatidae

## ANNEX II.A

### COMMUNICATION OF CATCH BY VESSEL

2) "Catch on ENTRY" COE report

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
From	FR	M	Name of transmitting Party
Address	AD	M	Message detail; destination, "XSE" for SEAFO
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; message type, "COE" as Catch on Entry report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Master Name	MA	M	Name of the master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel.
Latitude	LA	M1	Activity detail; position at time of transmission
Longitude	LO	M1	Activity detail; position at time of transmission
Relevant Area	RA	M	SEAFO Division into which the vessel is about to enter
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
On Board	OB	M	Activity detail; Total quantity by species in kg, upon entry in the Convention Area. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //OB/speciesspaceweightspacspeciespaceweightspace species spaceweight//
Species live weight			
End of record	ER	M	System detail; indicates end of the record

1. Optional if the vessel is subject to satellite tracking in accordance with Article 13.

## 2) "Catch" (CAT) report

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, "XSE" for SEAFO
From	FR	M	Message detail; Address of the transmitting party (ISO-3)
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; message type, "CAT" as Catch report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Contracting Party Internal Reference Number	IR	O	Vessel registration detail; unique Contracting Party vessel number as ISO-3 flag State code followed by number
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel.
Relevant Area	RA	M	Activity detail; SEAFO Division
Latitude	LA	M <sup>1</sup>	Activity detail; position at time of transmission
Longitude	LO	M <sup>1</sup>	Activity detail; position at time of transmission
Catch  species live weight	CA	M	Activity detail; Catch retained onboard by species and by Division since last CAT report in kg. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes)+live weight in kg (until 9 digits), with each field separated by a space, e.g.//CA/speciesspaceweightspacspeciespaceweightspace speciesspaceweightspace//
Discarding  species live weight	RJ	M	Activity detail; Catch discarded by species and by Division since last CAT report, in kg. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kg (until 9 digits), with each field separated by a space, e.g. //RJ/speciesspaceweightspacspeciespaceweightspacspecies spaceweight//
Chartering Flag	CH	M <sup>2</sup>	Flag of Chartering Contracting Party to which the catch must be allocated.
Days Fished	DF	M <sup>3</sup>	Activity detail; number of fishing days in the Convention Area since last CAT report, as appropriate
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
End of record	ER	M	System detail; indicates end of the record

1. Optional if the vessel is subject to satellite tracking in accordance with Article 13.

2. Mandatory if fishing under chartering agreement.

3. The reporting period should be 5 days, or more frequently as required by the Contracting Party

Note: Nil catch retained and nil discards of all species shall be reported using the 3-Alpha Code MZZ (marine species not specified) and quantity as "0" as the following examples demonstrate //CA/MZZ 0// and //RJ/MZZ 0//

## 3) "Catch on EXIT" (COX) report

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, "XSE" for SEAFO
From	FR	M	Name of transmitting party
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; "COX" as Catch on Exit report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Master Name	MA	O	Name of master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Latitude	LA	O <sup>1</sup>	Activity detail; position at time of transmission
Longitude	LO	O <sup>1</sup>	Activity detail; position at time of transmission
Relevant Area	RA	M	SEAFO Division from which the vessel is about to exit
Catch  species live weight	OB	M	Activity detail; Total quantity by species on board, upon exit from the Convention Area. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kg (until 9 digits), with each field separated by a space, e.g. //OB/speciesspaceweightspacepeciesspaceweightspace-species spaceweight//
Days Fished	DF	O	Activity detail; number of fishing days in the Convention Area
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
End of record	ER	M	System detail; indicates end of the record

<sup>1</sup> Optional if the vessel is subject to satellite tracking in accordance with Article 13.

## ANNEX II.B COMMUNICATION OF CATCH BY CONTRACTING PARTY

### "Periodic Catch" (REP) Report

Data Element:	Code	Mandatory / Optional	Remarks:
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, "XSE" for SEAFO
From	FR	M	Message detail; Contracting Party sending the report
Record Number	RN	M	Message detail; Serial number of retransmission of the message/report by the FMC (annual count)
Record date	RD	M	Message detail; date of transmission
Record time	RT	M	Message detail; time of transmission
Type of Message	TM	M	Message detail; message type, REP for report of provisional monthly statistics of catches of fisheries resources
Year and month	YM	M	Reporting detail; relevant year and month of reporting
Relevant Area	RA		Reporting detail; SEAFO division where the catch is taken
Catch  species live weight	CA	M	Reporting detail; aggregate catch retained onboard by species and division since last REP report in kg taken in the Convention Area by vessels of the Contracting Party, allow for several pairs as needed  FAO species code
Discarding  species live weight	RJ	M	Activity detail; aggregated catch discarded by species and by Division since last REP report, in kg. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g.  //RJ/speciesspaceweightspacespeciesspaceweightspaces pecies spaceweight//
End of record	ER	M	System detail; indicates end of the record

Each data transmission shall be structured as follows:

- double slash (//) and the characters "SR" indicate the start of a message,
- a double slash (//) and the field code indicate the start of a data element,
- a single slash (/) separates the field code and the data,
- pairs of data are separated by a space,

the characters "ER" followed by a double slash (//) indicate the end of a record



## ANNEX III

### VMS REPORTING FORMAT

The first transmitted position report in the Convention Area detected by the flag State FMC shall be identified as “ENT”. All subsequent position reports shall be identified as “POS” except the first position report identified outside the Convention Area which shall be identified as “EXI”.

#### 5) VMS message sequence

Data Element	Code	Remarks
Entry	ENT	The first position report from a vessel detected to be inside the Convention Area
Position	POS	Position report every two hours
Exit	EXI	The first position report from a vessel detected outside the Convention area.

#### 6) VMS message format

Data Element	Code	Mandatory / Optional	Remarks
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; Destination SEAFO (XSE)
From	FR	M	Name of transmitting party
Record Number	RN	M	Message detail; Serial number of retransmission of the message/report by the FMC (annual count)
Record date	RD	M	Message detail; date of transmission
Record time	RT	M	Message detail; time of transmission
Sequence Number	SQ	M	Message detail; Serial number of the message/report as transmitted by the vessel (annual count)
Type of Message	TM	M	Message detail; Message type; ENT, POS, EXI relating to entry, position or exit, as appropriate
Radio Call Sign	RC	M	Vessel Registration Detail; International Radio Call Sign
Trip Number	TN	O	Activity Detail; trip serial number in current year
Vessel Name	NA	O	Vessel Registration Detail; Vessel name
Internal Reference Number	IR	O	Vessel registration detail. Unique Contracting Party vessel number as ISO-3 flag State code followed by
External Registration Number	XR	O	The side number of the vessel
Latitude (decimal)	LT	M	Activity Detail; Vessel position at time of transmission
Longitude (decimal)	LG	M	Activity Detail; Vessel position at time of transmission
Speed	SP	M	Activity Detail; speed at time of transmission. Knots*10 e.g. //SP/105 = 10.5 knots
Course	CO	M	Activity Detail; course at time of transmission. 360° degree scale e.g. //CO/270 = 270
Date	DA	M	Message Detail; Date of transmission
Time	TI	M	Message Detail; Time of transmission
End of record	ER	M	System detail; indicates end of the record

## 7) Exchange Format and Protocols

Each VMS data transmission will:

- (e) Be transmitted in accordance with ISO 8859.1
- (f) Be structured as follows:
  - double slash ("/") and the characters "SR" indicate the start of a message;
  - a double slash ("/") and field code indicate the start of a data element;
  - a single slash ("/") separates the field code and the data;
  - pairs of data are separated by space;
  - the characters "ER" and a double slash ("/") at the end indicates the end of a record.
- (g) Include the address (AD) with SEAFO (XSE) as the destination
- (h) Include "record date" (RD), "record time" (RT), "record number" (RN) and "from" (FR) data elements

## 8) Return message error codes

If a Contracting Party so requests, the Secretary shall send a return message for each electronic transmission of a report or message

### Return message format (RET message)

Data Element	Field Code	Mandatory/Optional	Remarks
Start Record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, Contracting Party sending the report
From	FR	M	Message detail; XSE is SEAFO (who is sending the return message)
Type of message	TM	M	Message detail; message type RET for return message
Radio call sign	RC	O	Reporting detail; international radio call sign of the vessel, copied from the report which is received.
Sequence number	SQ	O	Reporting detail; Serial number of the message/report as transmitted by the vessel (annual count)
Return Status	RS	M	Reporting detail; code showing whether the message is acknowledged or not (ACK or NAK)
Return error number	RE	O	Reporting detail; number showing the type of error. See table B) for return error numbers.
Record number	RN	M	Reporting detail; record number of the message which is received
Date	DA	M	Message detail; date of transmission
Time	TI	M	Message detail; time of transmission
End of Record	ER	M	System detail; indicates end of the record

### Return message error codes

Subject/Article:	Errors		Error Cause
	Follow up action required	Accepted	
Communication	101		Message is unreadable
	102		Data value or size out of range
	104		Mandatory data missing
	105		This report is a duplicate; attempt to re-send a report previously rejected.
	106		Unauthorized data source
		150	Sequence error
		151	Date / Time in the future
Article 11		155	This report is a duplicate; attempt to re-send a report previously accepted.
	301		Catch (CAT) prior to catch on entry (COE)
	303		Catch on exit (COX) prior to catch on entry (COE)
	304		No position received prior to catch on exit (COX)
		350	Position without Catch on Entry (COE)

**ANNEX IV**

**SEAFO TRANSHIPMENT DECLARATION**

Name of vessel:

External identification:

Recipient Vessel

Radio Call sign if any:

SEAFO number:

Name:

Radio Call sign:

External identification:

Nationality of recipient vessel:

Day      Month      Hour      Year |2\_|0\_|\_|\_|      Agent's name:  
 Departure      |\_|\_|      |\_|\_|      |\_|\_|      from      |\_\_\_\_\_|  
 Return      |\_|\_|      |\_|\_|      |\_|\_|      to      |\_\_\_\_\_|  
 Transhipment      |\_|\_|      |\_|\_|      |\_|\_|      |\_\_\_\_\_|

Master's name:  
  
 Signature:      Signature:

Indicate the weight in kilograms or the unit used (e.g. box, basket) and the landed weight in kilograms of this unit: |\_\_\_\_\_| kilograms <sup>(3)</sup> <sup>(4)</sup>

Species	Port of Transhipment <sup>(2)</sup>	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)	Presentation (1)
	Name of Port, Country	Whole	Gutted	Head off	Filletted						

## **TRANSHIPMENT DECLARATION**

### **5. General rule**

In the case of transshipment, the master of the vessel shall enter the quantities on the transshipment declaration. A copy of the transshipment declaration shall be handed to the master of the recipient vessel.

### **6. Procedure for completion**

- e. Entries on transshipment declaration shall be legible and indelible.
- f. No entry on the transshipment declaration may be erased or altered. If a mistake is made, the incorrect entry shall be struck out with a line and followed by a new entry initialed by the master or his agent.
- g. One transshipment declaration should be completed for each transshipment operations.
- h. Each page of the transshipment declaration shall be signed by the master.

### **7. Responsibilities of the master in respect of the landing declaration and the transshipment declaration**

The master of the vessel shall certify with his initials and signature that the estimated quantities entered on the transshipment declaration are reasonable. The copies of the transshipment declaration must be kept for one year.

### **8. Information to be provided**

The estimates of the quantities transhipped are to be indicated as follows, for each species, on one of the declaration forms in respect of a particular voyage:

- **Presentation of fish** (reference n° 1)

"*Presentation*" means the way fish has been processed. Indicate the nature of this processing if any: GUT for gutting, HEAD for heading, FILLET for filleting, etc ... Where no processing has taken place, WHOLE for whole fish.

- **Measurement unit for landed quantities** (reference n° 3)

Give the unit of weight used (e.g. basket, box, etc.) for landing fish and the weight of the unit in kilograms. This unit may be different from that used in the logbook.

- **Total weight species transhipped** (reference n° 4)

Give the weight or quantities actually transhipped for all fisheries resources covered by the SEAFO Convention. The weight should correspond to the weight of fish as landed, i.e. after any processing on board. Conversion coefficients will be applied subsequently by the appropriate authorities in the CPC to calculate the corresponding live weight.

- **Name of Port** (reference n° 2)

*Name of Port, Country* refers to the port and country in which the transshipment will take place.

### **5. Procedure of transmission**

- d. In the case of transshipment to a vessel flying the flag of a Contracting Party or registered in a Contracting Party, the first copy of the transshipment declaration shall be handed over to the master of the recipient vessel. The original shall be handed over or dispatched, as the case may

be, to the authorities of the Contracting Party whose flag the vessel is flying or in which it is registered, within 48 hours of completion of landing or on arrival in port.

- e. In the case of transshipment to a vessel flying the flag of a non-member country, the original document shall be handed over or sent, as the case may be, as soon as possible to the Contracting Party whose flag the vessel is flying or in which it is registered.
- f. In cases where it is impossible for the master to dispatch the original of the transshipment declarations to the authorities of the Contracting Party whose flag the vessel is flying or in which it is registered within the time limits specified, the information required in respect of the declaration shall be transmitted by radio or by other means to the authorities concerned.

The information shall be transmitted via the radio stations usually used, preceded by the name, the call sign and external identification of the vessel, and the name of its master. In cases where it is not possible for the message to be transmitted by the vessel, it may be transmitted on the vessel's behalf by another vessel or by any other method. The master shall ensure that information transmitted to radio stations is passed on in writing to the relevant authorities.

# ANNEX V

## SOUTH EAST ATLANTIC FISHERIES ORGANISATION SEAFO

### REPORT OF AT SEA INSPECTION

(Inspector: Please use BLOCK CAPITAL LETTERS)

Note to master of the vessel to be inspected

In accordance with SEAFO System Article 15, the Inspector is entitled to inspect and measure all fishing gear on or near the working deck and readily available for use and the catch on and/or below decks and any relevant documents. The inspection will be to check your compliance with SEAFO’s measures to which your country has not objected and, notwithstanding any such objection, to inspect the logbook entries and fishing records for the Convention Area and the catches on board. The Inspector is authorised to examine and photograph the vessel’s gear, catch, logbook or other relevant documents. The information provided during the course of this inspection will be made available to the SEAFO Secretariat and the flag State. Should an alleged infringement be detected this report will also be circulated to all Contracting Parties. All information contained in this report will be considered within the SEAFO rules of confidentiality.

1. INSPECTOR(s)

1.a	Name	Nationality
1.		
2.		
3.		

1.b Name and identifying letters and/or number of vessel carrying the Inspector .....  
 .....

2. INFORMATION ON VESSEL INSPECTED

2.a Vessel’s name and registration number .....

2.b Country and port of registration .....

2.c International radio call sign .....

2.d Type of vessel (fishing, research) .....

2.e Tonnage: GT ..... NRT.....

2.f Master’s name .....

2.g Owner’s name and address .....  
 .....

3. DESCRIPTION OF ACTIVITY IN WHICH THE VESSEL WAS ENGAGED

	When Sighted:	When Boarded:
Vessel activity:		

[ Steaming, setting gear, hauling gear, towing gear, stationary, transshipping, other (specify)]

4. DETAILS OF INSPECTION

4.a Date ..... Time arrived on board ..... UTC

4.b Opinions of the master and inspector regarding the position of the vessel:

	Time (UTC)	Latitude		Longitude		Equipment used in Determining Position, e.g. GPS	SEAFO Area, Subarea or Division
		Deg.	Min.	Deg.	Min.		
Master							
Inspector							

4.c Type of fishing gear in current or recent use (e.g. trawling, longlining, traps) .....

4.d Target species .....

4.e Current control and conservation measures applicable, in the opinion of the inspector, to this fishery:

Reference Number/Article	Summary Title
1.	
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7.3 Master's Statement .....  
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8. COMPLETION OF INSPECTION

8.1 Date ..... Time of departure .....UTC

8.2 Signature of Inspector in Charge .....  
Name (Please use BLOCK CAPITAL LETTERS) .....

8.3 Signature of Second Inspector .....  
Name (Please use BLOCK CAPITAL LETTERS) .....

8.4 Acknowledgment and receipt of report:  
  
I, the undersigned, master of the vessel ....., hereby confirm that a copy of this report has been delivered to me on this date. My signature does not constitute acceptance of any part of the contents of the report.  
  
Date and Time .....  
Signature of master .....  
  
Name (Please use BLOCK CAPITAL LETTERS)

## ANNEX VI

**INFORMATION TO BE PROVIDED IN ADVANCE BY  
FOREIGN VESSELS REQUESTING PORT ENTRY**

<b>1. Intended port of call</b>										
<b>2. Port State</b>										
<b>3. Estimated date and time of arrival</b>										
<b>4. Purpose(s)</b>										
<b>5. Port and date of last port call</b>										
<b>6. Name of the vessel</b>										
<b>7. Flag State</b>										
<b>8. Type of vessel</b>										
<b>9. International Radio Call Sign</b>										
<b>10. Vessel contact information</b>										
<b>11. Vessel owner(s)</b>										
<b>12. Certificate of registry ID</b>										
<b>13. IMO ship ID, if available</b>										
<b>14. External ID, if available</b>										
<b>15. SEAFO ID, if applicable</b>										
<b>16. VMS</b>		No			Yes: National		Yes: SEAFO		Type:	
<b>17. Vessel dimensions</b>			Length		Beam		Draft			
<b>18. Vessel master name and nationality</b>										
<b>19. Relevant fishing authorization(s)</b>										
<i>Identifier</i>	<i>Issued by</i>	<i>Validity</i>	<i>Fishing area(s)</i>	<i>Species</i>	<i>Gear</i>					
<b>20. Relevant transshipment authorization(s)</b>										
<i>Identifier</i>		<i>Issued by</i>		<i>Validity</i>						
<i>Identifier</i>		<i>Issued by</i>		<i>Validity</i>						
<b>21. Transshipment authorizations concerning donor vessels</b>										
<i>Date</i>	<i>Location</i>	<i>Name</i>	<i>Flag State</i>	<i>ID no.</i>	<i>Species</i>	<i>Product form</i>	<i>Catch area</i>	<i>Quantity</i>		
<b>22. Total catch onboard</b>							<b>23. Catch to be offloaded</b>			
<i>Species</i>	<i>Product form</i>	<i>Catch area</i>	<i>Quantity, Conversion factor and Live weight</i>				<i>Quantity</i>			

## ANNEX VII

### GUIDELINES FOR THE TRAINING OF INSPECTORS

Elements of a training program for port State inspectors should include at least the following areas:

13. Ethics;
14. Health, safety and security issues;
15. Applicable national laws and regulations, areas of competence and conservation and management measures of SEAFO, and applicable international law;
16. Collection, evaluation and preservation of evidence;
17. General inspection procedures such as report writing and interview techniques;
18. Analysis of information, such as logbooks, electronic documentation and vessel history (name, ownership and flag State), required for the validation of information given by the master of the fishing vessel;
19. Fishing vessel boarding and inspection, including hold inspections and calculation of vessel hold volumes;
20. Verification and validation of information related to landings, transshipments, processing and fishery resources remaining onboard, including utilizing conversion factors for the various species and products;
21. Identification of fish species, and the measurement of length and other biological parameters;
22. Identification of vessels and gear, and techniques for the inspection and measurement of gear;
23. Equipment and operation of VMS and other electronic tracking systems; and
24. Actions to be taken following an inspection.

## ANNEX VIII

### PORT STATE INSPECTION PROCEDURES

Inspectors shall:

- a) verify that the vessel identification documentation onboard and information relating to the owner of the vessel is true, complete and correct, including through appropriate contacts with the flag State or international records of vessels if necessary;
- b) verify that the vessel's flag and markings (e.g. name, external registration number, International Maritime Organization (IMO) ship identification number, international radio call sign and other markings, main dimensions) are consistent with information contained in the documentation;
- c) verify that the authorizations for fishing and fishing related activities are true, complete, correct and consistent with the information provided in accordance with Annex VI;
- d) review all other relevant documentation and records held onboard, including, to the extent possible, those in electronic format and vessel monitoring system (VMS) data from the flag State or SEAFO. Relevant documentation may include logbooks, catch, transshipment and trade documents, crew lists, stowage plans and drawings, descriptions of holds, and documents required pursuant to the Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- e) examine all relevant areas, fishing gear onboard, including any gear stowed out of sight as well as related devices, and to the extent possible, verify that they are in conformity with the conditions of the authorizations. The fishing gear shall, to the extent possible, also be checked to ensure that features such as the mesh and twine size, devices and attachments, dimensions and configuration of nets, pots, dredges, hook sizes and numbers are in conformity with applicable regulations and that the markings correspond to those authorized for the vessel;
- f) determine whether the fishery resources on board was harvested in accordance with the applicable authorizations;
- g) examine the fishery resources, including by sampling, to determine its quantity and composition. In doing so, inspectors may open containers where the fishery resources have been pre-packed and move the catch or containers to ascertain the integrity of holds. Such examination may include inspections of product type and determination of nominal weight;
- h) evaluate whether there is clear evidence for believing that a vessel has engaged in IUU fishing or fishing related activities in support of such fishing;
- i) provide the master of the vessel with the report containing the result of the inspection, including possible measures that could be taken, to be signed by the inspector and the master. The master's signature on the report shall serve only as acknowledgment of the receipt of a copy of the report. The master shall be given the opportunity to add any comments or objection to the report, and, as appropriate, to contact the relevant authorities of the flag State in particular where the master has serious difficulties in understanding the content of the report. A copy of the report shall be provided to the master; and
- j) arrange, where necessary and possible, for translation of relevant documentation.

## ANNEX IX

## REPORT OF THE RESULTS OF THE PORT INSPECTION

<b>1. Inspection report no</b>	<b>2. Port State</b>					
<b>3. Inspecting authority</b>						
<b>4. Name of principal inspector</b>	<b>ID</b>					
<b>5. Port of inspection</b>						
<b>6. Commencement of inspection</b>	YYYY	MM	DD	HH		
<b>7. Completion of inspection</b>	YYYY	MM	DD	HH		
<b>8. Advanced notification received</b>		Yes	No			
<b>9. Purpose(s)</b>	LAN	TRX	PRO	OTH (specify)		
<b>10. Port and State and date of last port call</b>		YYYY	MM	DD		
<b>11. Vessel name</b>						
<b>12. Flag State</b>						
<b>13. Type of vessel</b>						
<b>14. International Radio Call Sign</b>						
<b>15. Certificate of registry ID</b>						
<b>16. IMO ship ID, if available</b>						
<b>17. External ID, if available</b>						
<b>18. Port of registry</b>						
<b>19. Vessel owner(s)</b>						
<b>20. Vessel beneficial owner(s), if known and different from vessel owner</b>						
<b>21. Vessel operator(s), if different from vessel owner</b>						
<b>22. Vessel master name and nationality</b>						
<b>23. Fishing master name and nationality</b>						
<b>24. Vessel agent</b>						
<b>25. VMS</b>	No	Yes: National	Yes: SEAFO	Type:		
<b>26. Status in SEAFO areas where fishing or fishing related activities have been undertaken, including any IUU vessel listing</b>						
<i>Vessel identifier</i>	<i>SEAFO</i>	<i>Flag State status</i>	<i>Vessel on authorized vessel list</i>	<i>Vessel on IUU vessel list</i>		
<b>27. Relevant fishing authorization(s)</b>						
<i>Identifier</i>	<i>Issued by</i>	<i>Validity</i>	<i>Fishing area(s)</i>	<i>Species</i>	<i>Gear</i>	
<b>28. Relevant transshipment authorization(s)</b>						
<i>Identifier</i>	<i>Issued by</i>	<i>Validity</i>				
<i>Identifier</i>	<i>Issued by</i>	<i>Validity</i>				
<b>29. Transshipment information concerning donor vessels</b>						
<i>Name</i>	<i>Flag State</i>	<i>ID no.</i>	<i>Species</i>	<i>Product form</i>	<i>Catch area(s)</i>	<i>Quantity</i>
<b>30. Evaluation of offloaded catch (quantity)</b>						
<i>Species</i>	<i>Product form</i>	<i>Catch area(s)</i>	<i>Quantity declared</i>	<i>Quantity offloaded</i>	<i>Difference between quantity declared and quantity determined, if any</i>	
<b>31. Catch retained onboard (quantity)</b>						

<i>Species</i>	<i>Product form</i>	<i>Catch area(s)</i>	<i>Quantity declared</i>	<i>Quantity retained</i>	<i>Difference between quantity declared and quantity determined, if any</i>
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<b>32. Examination of logbook(s) and other documentation</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>
<b>33. Compliance with applicable catch documentation scheme(s)</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>
<b>34. Compliance with applicable trade information scheme(s)</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>
<b>35. Type of gear used</b>					
<b>36. Gear examined in accordance with paragraph e) of Annex VIII</b>			<i>Yes</i>	<i>No</i>	<i>Comments</i>

<b>37. Findings by inspector(s)</b>
<b>38. Apparent infringement(s) noted including reference to relevant legal instrument(s)</b>
<b>39. Comments by the master</b>
<b>40. Action taken</b>
<b>41. Master's signature</b>
<b>42. Inspector's signature</b>

## Annex 12 - 2017 IUU Vessel list



## Provisional 2017 IUU Vessel list

IMO Number	Vessel Name	Previous Names	Current flag and previous flag in brackets	Current IRCS	Summary of activities	Operator and previous operator in brackets	IUU-listing Organizations	IUU Listing Dates
<b>7306570</b>	Alboran II	1. White Enterprise 2. Enxembre 3. Atalaya 4. Reda IV 5. Atalaya del Sur	Unknown (1. Panama (2. St. Kitts & Nevis)	Unknown	Gibraltar (31 March 2009)		NEAFC NAFO	2009
<b>7424891</b>	Aldabra			5VAA2	- Fishing inside Division 58.4.4b (10 Nov 2006)	- Cecibell Securities - Farway Shipping	CCAMLR	2007
<b>7036345</b>	Amorinn			5VAN9	Inside Division 58.4.2 (23 Jan 2004)	- InfitcoLtd (Ocean Star Maritime CO)	CCAMLR	2003



<b>8514772</b>	Andrey Dolgov				Landing IUU catch (25 May 2016)	- Maruha Corporation - Taiyo Namibia - Taiyo Susan - Taiyo A&F Co. Ltd - Sun Tai International Fishing Corp - STD Fisheries Co. Ltd - Red Star Co. Ltd - Poseidon Co. Ltd	CCAMLR	2016
<b>7236634</b>	Antony		Tanzania, United Republic of	PQMG	Supporting IUU-listed vessels (03 Mar 2016)	- Atlanti Pez - Urgora S de RL - World Oceans Fishing SL	CCAMLR	2016
<b>9037537</b>	Baroon		Tanzania, United Republic of	5IM376	Sighted 57 (14 Feb 2014)	- Punta Brava Fishing SA - Vero Shipping Corporation	CCAMLR	2007
<b>6622642</b>	Challenge			HO5381	Inside Division 58.4.3b Feb 2008)	- Prion Ltd (- Vidal Armdores S.A. - Mar de Neptuno SA - Advantage Company SA - Argibay Perez.J.A)	CCAMLR	2006
<b>8604668</b>	Eros Dos	Furabolos	Unknown (1. Panama 2. Seychelles)	Unknown	St. Eugenia de Ribeira, Spain (05 March 2009)		NAFO	2009
<b>7020126</b>	Good Hope		Nigeria	5NMU	- Resupplying IUU vessels Area 51 (09 Feb 2007)	- Sharks Investments AVW - Port Plus Ltd	CCAMLR	2007

<b>6714919/ 6719419</b>	Gorilero	Gran Sol	Unknown	Unknown	La Coruna, Spain (September 2007)		NEAFC NAFO	2007
<b>7322926</b>	Heavy Sea			3ENF8	Inside Division 57	- C&S Fisheries S.A. - Muner SA - Metereros Shipping - Meteora Shipping Inc. - Barroso Fish S.A.	CCAMLR	2004
<b>7332218</b>	Iannis I	Unknown	Unknown (Panama)	HO3374	Indian Ocean		NEAFC NAFO	2007
<b>6803961</b>	Itziar II		Nigeria	5NTV3	Sighted 88.2 (16 Dec 2009)	- Monteco Shipping - Transglobe Investments Ltd - Capensis	CCAMLR	2003
<b>7905443</b>	Koosha 4		Iran, Islamic Republic of	9BQK	Inside Division 58.4.1 (15 Feb 2011)	Pars Paya Seyd Industrial Fish	CCAMLR	2011
<b>7322897</b>	Kunlun			3CAG	Sighting 57 (26 Feb 2015)	- Navalmar S.A. - Meteora Development Inc - Vidal Armadores S.A. - Rajan Corporation - Rep Line Ventures S.A. - Stanley Management Inc	CCAMLR	2003
<b>7388267</b>	Limpopo				Sighted 58.4.3b (25 Jan 2007)	- Grupo Oya Perez (Kang Brothers) - Lena Enterprises Ltd - Alos Company Ghana Ltd	CCAMLR	2003

<b>7325746</b>	Maine (Labiko)	1. Guinespa I 2. Maposa Noveno	Guinea Conakry	3XL2	NEAFC Regulatory Area (29 Oct 2007)		NEAFC NAFO	2007
<b>7385174</b>	Murtosa		Unknown (Togo)	Unknown		Aveiro, Portugal (since 2005)	NEAFC NAFO	2005
<b>8808903</b>	Northern Warrior			PJSA	Supporting IUU- listed vessels (03 Mar 2016)	-SIP -Areapesca SA - Snoek Wholesalers - Southern Trading Group - South Atlantic - Fishing NV	CCAMLR	2016
<b>5062479</b>	Perlon			5NTV21	Sighted 57 (20 Jul 2014)	- Vakin S.A. - Jose Lorenzo SL - Americagalaica S.A.	CCAMLR	2003
<b>6607666</b>	Ray	5. Killy 6. Tropics 7. Isla Graciosa 8. Constant	Belize	V3RB2	Fishing 58.4.3b (20 Jan 2009) Fishing inside Division A (2012)	- Arniston Fish -- Processors (Pty) Ltd - Vidal Armadores S.A. - Nalanza S.A. - Argibay Perez J.A. - Belfast Global S.A.	CCAMLR SEAFO	2006 2012
<b>6818930</b>	Tchaw				Fishing 58.4.3b (14 Mar 2007)	- Arcosmar Fisheries Corporation - JMS Lopez - Premier Business - His-To Company Ltd - Jose Manuel Salgueiro	CCAMLR	2005
<b>7321374</b>	Trinity	1. Yucutan Basin 2. Enxembre 3. Fonte Nova	Unknown	Unknown	Tema Ghana (2011)		NEAFC NAFO	200413w

4. Jawhara										
<b>9319856</b>	Zemour 1	Songhua	Mauritania	9LU2119	Hauling 58.4.1H (06 Jan 2015)	-Mabenal S.A. - Vidal Armadores S.A. - Omunkete Fishing Pty Ltd - Gongola Fishing JV (Pty) Ltd - Eastern Holdings	CCAMLR	2008		
<b>9042001</b>	Zemour 2	Yonding	Mauritania	3CAE	Fishing 58.4.1H (12 Jan 2015)	- Viarsa Fishing Company/Navalmar S.A. - Global Intercontinental Services - Rajan Corporation - Redlines Ventures SA	CCAMLR	2004		

## Annex 13 - SCAF Report

### REPORT OF THE 8<sup>th</sup> ANNUAL MEETING OF THE STANDING COMMITTEE ON ADMINISTRATION AND FINANCE (SCAF) Port Elizabeth, South Africa 2 December 2016

#### 1. Opening of the meeting

The Chairperson, Mr. Kristoffer Bjorklund, from Norway, opened the meeting and welcomed all delegates and expressed his wishes for a productive and efficient meeting.

#### 2. Appointment of Rapporteur

Ms Zukiswa Nkhereanye from the Department of Agriculture, Forestry and Fisheries (South Africa) to take minutes and all Contracting Parties agreed.

#### 3. Adoption of agenda and meeting arrangements

The agenda was adopted with amendments to include the recommendations of the performance review.

#### 4. Introduction of Parties Delegation

The Heads of Delegations introduced their members (Appendix 1). Although SCAF is a closed meeting, the Committee agreed that the Chair of the Performance Review Panel be allowed to attend the meeting.

#### 5. Presentation of the 2015 Audit Report

The Secretariat presented the 2015 audit report. SCAF has noted that the audit report is unqualified and there have been no facts or circumstances of material nature that have occurred between the accounting date and the date of the 2015 Audit Report.

#### 6. Executive Secretary's Report on Administration and Finance

The Secretariat presented an overview of the Administration and Finance Report, including the activities undertaken for the period under review. The expenditures up the end of 31 October were presented.

The Secretariat reported that not all Contracting Parties had made their contributions at the time of the compilation of the 2016 report and that Contracting Parties made overpayments, whilst others have underpaid. Namibia informed the meeting that they are currently experiencing budgetary constraints and that they will make a payment soon. Angola indicated that the payment has been made and Secretariat requested to check whether it is reflected. SCAF requested the Secretariat to explain the reasons for the over and underpayments in the report from next year. As has been the norm, these differences will be accounted for in the next contributions of the Parties.

The meeting was informed that the EU requested SEAFO to repay the grant funds that was paid to SEAFO under Grant S12.600668. The Secretariat indicated that the payment procedure has been effected and the payment will be made soon.

#### 7. Performance Review Recommendations

EU presented the working document on the review of staff regulations, including amendments on few articles, such as salaries, tax levies, benefits, leave, travel expenses, etc.

The meeting recommended however, that these matters should be deliberated on in 2017 in connection with the Commission's work on the future organization of SEAFO.

#### 8. Approval of the proposed 2017 budget and 2018 forecast

The Executive Secretary presented the proposed budget for 2017 and reported that the official inflation rate is 7%, based on the inflation figures released by the Bank of Namibia.

Most of the votes were increased with 7% compared to the 2016 budget allocation, except where reflected in the corresponding budget. However, an amount of 80 thousand Namibian Dollars were included in the Budget based on requests from the Scientific Committee and the Compliance Committee, respectively.

The secretariat was tasked by the committee to look into formalizing the position of the casual employee.

The committee approved the Budget for 2017 with the inclusion of the 80 thousand NMD (Appendix 2).

**9. Contributions by Parties**

Contributions by parties were calculated based on the formula adopted in 2009 (Appendix 3).

**10. Compile Contract for Executive Secretary**

The meeting took note of the existing contract and recommends that it albeit with some minor amendments, be used as basis for the next contract for Executive Secretary.

**11. Any other matters**

No other matters were raised.

**12. Election of Chair and Vice-Chair person**

The committee agreed Norway and Japan continue to serve as Chair and Vice-Chair for another year.

**13. Adoption of the SCAF report**

The Committee reviewed and adopted the report.

**14. Venue and date of next meeting**

The Committee noted that the date and venue of the next meeting will be decided by the Commission.

**15. Closure of meeting**

The Chairperson closed the meeting on 2 December 2016 in good faith at 10:30.

**Appendix 1 - LIST OF DELEGATES****CHAIRPERSON**

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**INTERPRETER**  
J. A. DOS SANTOS  
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## Appendix 2

Budget line	Activity description	Allocation	Provisional Allocation	% increase	Forecast
		2016	2017		
<b>Staff Costs</b>					
4400/001	Salaries Paid Cash	2 075 589,63	<u>2 220 880,90</u>	7,00	2 467 398,68
4400/002	P.A.Y.E.	347 668,50	<u>327 350,62</u>	-5,84	350 265,16
4400/003	Social Security	3 888,00	3 888,00	0,00	3 888,00
	<b>Sub Total</b>	<b>2 427 146,13</b>	<b>2 552 119,52</b>	5,15	<b>2 821 551,84</b>
4410/004	Car Allowance	27 927,81	29 882,76	7,00	31 974,55
	<b>Total</b>	<b>2 455 073,94</b>	<b>2 582 002,28</b>	<b>5,17</b>	<b>2 853 526,40</b>
<b>Temporary Staffing</b>					
3100/000	Consultant	0,00	0,00	0,00	0,00
4700/000	Wages - Casual	50 519,04	<u>54 055,37</u>	7,00	57 839,25
	<b>Total</b>	<b>50 519,04</b>	<b>54 055,37</b>	<b>7,00</b>	<b>57 839,25</b>
<b>Employee Benefits</b>					
9400/001	Installation Grant	<u>61 118,53</u>	<u>61 118,53</u>		61 118,53
9400/002	Removal Expenses	<u>29 133,58</u>	<u>29 133,58</u>		29 133,58
9400/003	Repatriation Removal Expenses	<u>91 429,85</u>	<u>91 429,85</u>		91 429,85
9400/004	Repatriation Allowance	<u>0,00</u>	<u>0,00</u>		74 108,00
9400/005	Home Leave - Travel	<u>35 766,12</u>	<u>35 766,12</u>		35 766,12
9400/006	External Travel	<u>15 651,55</u>	<u>15 651,55</u>		15 651,55
9400/007	Leave Pay Provision	<u>86 161,01</u>	<u>86 161,01</u>		86 161,01
9400/008	Severance Pay Provision	<u>211 927,58</u>	<u>211 927,58</u>		211 927,58
9400/009	Mortality Allowance	<u>218 811,78</u>	<u>218 811,78</u>		218 811,78
	<b>Total</b>	<b>750 000,00</b>	<b>750 000,00</b>		<b>824 108,00</b>
<b>Operational Expenses</b>					
3000/000	Accounting Fees	51 621,15	55 750,84	8,00	59 653,40
3050/000	Advertising & Promotions	15 015,00	16 066,05	7,00	17 190,67
3200/000	Bank Charges	15 246,00	16 313,22	7,00	17 455,15
3330/000	Overtime	5 775,00	6 179,25	7,00	6 611,80
3355/000	Contingency	10 279,50	10 999,07	7,00	10 999,07
3400/000	Courier & Postage	2 310,00	2 471,70	7,00	2 471,70
3700/000	Entertainment	7 507,50	8 033,03	7,00	8 595,34
3850/000	Insurance	20 443,50	21 874,55	7,00	23 405,76
4200/000	Stationary	10 279,50	10 999,07	7,00	11 769,00
4500/000	Office expenses	6 733,65	7 205,01	7,00	7 709,36
6300/010	Office Equipment	42 500,00	20 000,00	-52,94	21 400,00
	<b>Total</b>	<b>187 710,80</b>	<b>175 891,77</b>	<b>-6,30</b>	<b>187 261,24</b>
<b>Computer Services</b>					
3300/000	Services	3 811,50	4 078,31	7,00	4 363,79
3301/000	Software	34 650,00	37 075,50	7,00	39 670,79
3302/000	Internet lease Line	57 750,00	61 792,50	7,00	66 117,98
3303/000	Web Services	25 900,00	29 785,00	15,00	31 869,95
6250/010	Hardware	25 000,00	25 000,00	0,00	26 750,00
	<b>Total</b>	<b>147 111,50</b>	<b>157 731,31</b>	<b>7,22</b>	<b>168 772,50</b>

**Fisheries Monitoring**

3304/000	VMS - Related Costs	2 750,00	0,00	0,00
	<b>Total</b>	<b>2 750,00</b>	<b>0,00</b>	<b>0,00</b>

**Training Secretariat Support**

3320/000	Training	27 830,00	27 830,00	0,00	27 830,00
	<b>Total</b>	<b>27 830,00</b>	<b>27 830,00</b>	<b>0,00</b>	<b>27 830,00</b>

**Performance Review**

3150/000	Perf. Review	150 000,00	0,00	0,00
	<b>Total</b>	<b>150 000,00</b>	<b>0,00</b>	<b>0,00</b>

**Printing**

4051/000	Reports and Translation	62 370,00	66 735,90	7,00	71 407,41
4050/000	Printing	17 556,00	18 784,92	7,00	20 099,86
	<b>Total</b>	<b>79 926,00</b>	<b>85 520,82</b>	<b>7,00</b>	<b>91 507,28</b>

**Communication**

4310/000	Rental & Maintenance Switchboard	15 246,00	16 313,22	7,00	17 455,15
4315/000	Maintenance Copier/Fax	11 896,50	12 729,26	7,00	13 620,30
4600/000	Telephone and Fax	78 078,00	83 543,46	7,00	89 391,50
	<b>Total</b>	<b>105 220,50</b>	<b>112 585,94</b>	<b>7,00</b>	<b>120 466,95</b>

**Meetings and Conferences**

4070/000	Meetings & Conferences	379 335,00	405 888,45	7,00	434 300,64
4070/001	Meetings Flights	0,00	75 000,00	0,00	80 250,00
4070/002	Meetings Accommodation	133 100,00	142 417,00	7,00	152 386,19
4070/003	Meetings Road	23 100,00	24 717,00	7,00	26 447,19
	<b>Total</b>	<b>535 535,00</b>	<b>648 022,45</b>	<b>21,00</b>	<b>693 384,02</b>

**Scientific Committee Support**

4090/000	SC support	80 000,00	50 000,00	0,00
	Compliance support		30 000,00	
	<b>Total</b>	<b>80 000,00</b>	<b>80 000,00</b>	<b>0,00</b>

**Other Travel**

4650/000	Travel Flights	243 155,00	200 175,00	-17,68	214 187,25
4651/000	Travel Accommodation	152 900,00	225 000,00	47,16	240 750,00
4652/000	Travel Road	56 364,00	60 309,48	7,00	64 531,14
	<b>Total</b>	<b>452 419,00</b>	<b>485 484,48</b>	<b>7,31</b>	<b>519 468,39</b>

**Petty Cash**

8300/000	Petty cash	9 586,50	10 257,56	7,00	10 975,58
	<b>Total</b>	<b>9 586,50</b>	<b>10 257,56</b>	<b>7,00</b>	<b>10 975,58</b>

<b>TOTAL EXPENDITURE</b>		<b>5 033 682,28</b>	<b>5 169 381,97</b>	<b>2,70</b>	<b>5 555 139,61</b>
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### Appendix 3 – Contracting Parties Contributions

Budget							
5 169 381,97	30% Countries sharing equal						
	221 544,94						
	60% shared on GDP						
	3 101 629,18						
	75% Developed Countries (EU, Japan, Korea, Norway)						
	581 555,47						
	25% Developing Countries (Angola, Namibia, South Africa)						
	258 469,10						
	10% Active Fishing Countries (Japan, Korea, Namibia)						
	172 312,73						
	<b>Angola</b>	<b>EU</b>	<b>Japan</b>	<b>Korea</b>	<b>Namibia</b>	<b>Norway</b>	<b>South Africa</b>
	480 014,04	803 100,41	975 413,14	975 413,14	652 326,77	803 100,41	480 014,04
	<b>2016 Contributions</b>						
	454 640,36	782 924,70	957 481,93	866 223,89	697 225,17	797 755,42	467 600,55
	<b>2016 Payment received</b>						
	-	782 924,70	978 173,98	873 467,52	-	821 238,13	467 600,55
	<b>Over (+), under payments (-) and arrears (-)</b>						
	<b>Angola</b>	<b>EU</b>	<b>Japan</b>	<b>Korea</b>	<b>Namibia</b>	<b>Norway</b>	<b>South Africa</b>
	454 640,36	-	(20 692,05)	(7 243,63)	697 225,17	(23 482,71)	-
	<b>Finale 2017 Contribution after reconciliation for over and under payments and arrears.</b>						
	Angola	EU	Japan	Korea	Namibia	Norway	South Africa
	934 654,40	803 100,41	954 21,09	968 169,51	1 349 551,94	779 617,70	480 014,04

## Annex 14 - 2017 Budget

Budget line	Activity description	Allocation	Provisional Allocation	% increase	Forecast
		2016	2017		2018
<b>Staff Costs</b>					
4400/001	Salaries Paid Cash	2 075 589,63	<u>2 220 880,90</u>	7,00	2 467 398,68
4400/002	P.A.Y.E.	347 668,50	<u>327 350,62</u>	-5,84	350 265,16
4400/003	Social Security	3 888,00	3 888,00	0,00	3 888,00
	<b>Sub Total</b>	<b>2 427 146,13</b>	<b>2 552 119,52</b>	<b>5,15</b>	<b>2 821 551,84</b>
4410/004	Car Allowance	27 927,81	29 882,76	7,00	31 974,55
	<b>Total</b>	<b>2 455 073,94</b>	<b>2 582 002,28</b>	<b>5,17</b>	<b>2 853 526,40</b>
<b>Temporary Staffing</b>					
3100/000	Consultant	0,00	0,00	0,00	0,00
4700/000	Wages - Casual	50 519,04	<u>54 055,37</u>	7,00	57 839,25
	<b>Total</b>	<b>50 519,04</b>	<b>54 055,37</b>	<b>7,00</b>	<b>57 839,25</b>
<b>Employee Benefits</b>					
9400/001	Installation Grant	<u>61 118,53</u>	<u>61 118,53</u>		61 118,53
9400/002	Removal Expenses	<u>29 133,58</u>	<u>29 133,58</u>		29 133,58
9400/003	Repatriation Removal Expenses	<u>91 429,85</u>	<u>91 429,85</u>		91 429,85
9400/004	Repatriation Allowance	<u>0,00</u>	<u>0,00</u>		74 108,00
9400/005	Home Leave - Travel	<u>35 766,12</u>	<u>35 766,12</u>		35 766,12
9400/006	External Travel	<u>15 651,55</u>	<u>15 651,55</u>		15 651,55
9400/007	Leave Pay Provision	<u>86 161,01</u>	<u>86 161,01</u>		86 161,01
9400/008	Severance Pay Provision	<u>211 927,58</u>	<u>211 927,58</u>		211 927,58
9400/009	Mortality Allowance	<u>218 811,78</u>	<u>218 811,78</u>		218 811,78
	<b>Total</b>	<b>750 000,00</b>	<b>750 000,00</b>		<b>824 108,00</b>
<b>Operational Expenses</b>					
3000/000	Accounting Fees	51 621,15	55 750,84	8,00	59 653,40
3050/000	Advertising & Promotions	15 015,00	16 066,05	7,00	17 190,67
3200/000	Bank Charges	15 246,00	16 313,22	7,00	17 455,15
3330/000	Overtime	5 775,00	6 179,25	7,00	6 611,80
3355/000	Contingency	10 279,50	10 999,07	7,00	10 999,07
3400/000	Courier & Postage	2 310,00	2 471,70	7,00	2 471,70
3700/000	Entertainment	7 507,50	8 033,03	7,00	8 595,34
3850/000	Insurance	20 443,50	21 874,55	7,00	23 405,76
4200/000	Stationary	10 279,50	10 999,07	7,00	11 769,00
4500/000	Office expenses	6 733,65	7 205,01	7,00	7 709,36
6300/010	Office Equipment	42 500,00	20 000,00	-52,94	21 400,00
	<b>Total</b>	<b>187 710,80</b>	<b>175 891,77</b>	<b>-6,30</b>	<b>187 261,24</b>
<b>Computer Services</b>					
3300/000	Services	3 811,50	4 078,31	7,00	4 363,79
3301/000	Software	34 650,00	37 075,50	7,00	39 670,79
3302/000	Internet lease Line	57 750,00	61 792,50	7,00	66 117,98
3303/000	Web Services	25 900,00	29 785,00	15,00	31 869,95
6250/010	Hardware	25 000,00	25 000,00	0,00	26 750,00
	<b>Total</b>	<b>147 111,50</b>	<b>157 731,31</b>	<b>7,22</b>	<b>168 772,50</b>

**Fisheries Monitoring**

3304/000	VMS - Related Costs	2 750,00	0,00	0,00
	<b>Total</b>	<b>2 750,00</b>	<b>0,00</b>	<b>0,00</b>

**Training Secretariat Support**

3320/000	Training	27 830,00	27 830,00	0,00	27 830,00
	<b>Total</b>	<b>27 830,00</b>	<b>27 830,00</b>	<b>0,00</b>	<b>27 830,00</b>

**Performance Review**

3150/000	Perf. Review	150 000,00	0,00	0,00
	<b>Total</b>	<b>150 000,00</b>	<b>0,00</b>	<b>0,00</b>

**Printing**

4051/000	Reports and Translation	62 370,00	66 735,90	7,00	71 407,41
4050/000	Printing	17 556,00	18 784,92	7,00	20 099,86
	<b>Total</b>	<b>79 926,00</b>	<b>85 520,82</b>	<b>7,00</b>	<b>91 507,28</b>

**Communication**

4310/000	Rental & Maintenance Switchboard	15 246,00	16 313,22	7,00	17 455,15
4315/000	Maintenance Copier/Fax	11 896,50	12 729,26	7,00	13 620,30
4600/000	Telephone and Fax	78 078,00	83 543,46	7,00	89 391,50
	<b>Total</b>	<b>105 220,50</b>	<b>112 585,94</b>	<b>7,00</b>	<b>120 466,95</b>

**Meetings and Conferences**

4070/000	Meetings & Conferences	379 335,00	405 888,45	7,00	434 300,64
4070/001	Meetings Flights	0,00	75 000,00	0,00	80 250,00
4070/002	Meetings Accommodation	133 100,00	142 417,00	7,00	152 386,19
4070/003	Meetings Road	23 100,00	24 717,00	7,00	26 447,19
	<b>Total</b>	<b>535 535,00</b>	<b>648 022,45</b>	<b>21,00</b>	<b>693 384,02</b>

**Scientific Committee Support**

4090/000	SC support	80 000,00	50 000,00		0,00
	Compliance support		30 000,00		
	<b>Total</b>	<b>80 000,00</b>	<b>80 000,00</b>		<b>0,00</b>

**Other Travel**

4650/000	Travel Flights	243 155,00	200 175,00	-17,68	214 187,25
4651/000	Travel Accommodation	152 900,00	225 000,00	47,16	240 750,00
4652/000	Travel Road	56 364,00	60 309,48	7,00	64 531,14
	<b>Total</b>	<b>452 419,00</b>	<b>485 484,48</b>	<b>7,31</b>	<b>519 468,39</b>

**Petty Cash**

8300/000	Petty cash	9 586,50	10 257,56	7,00	10 975,58
	<b>Total</b>	<b>9 586,50</b>	<b>10 257,56</b>	<b>7,00</b>	<b>10 975,58</b>

<b>TOTAL EXPENDITURE</b>		<b>5 033 682,28</b>	<b>5 169 381,97</b>	<b>2,70</b>	<b>5 555 139,61</b>
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**Annex 15 - Contracting Parties Contributions**

<b>Budget</b>	30% Countries sharing equal						
	5 169	221 544,94					
381,97	60% shared on GDP						
	3 101 629,18	75% Developed Countries (EU, Japan, Korea, Norway)					
		581 555,47					
		25% Developing Countries (Angola, Namibia, South Africa)					
		258 469,10					
	10% Active Fishing Countries (Japan, Korea, Namibia)						
	172 312,73						
	<b>Angola</b>	<b>EU</b>	<b>Japan</b>	<b>Korea</b>	<b>Namibia</b>	<b>Norway</b>	<b>South Africa</b>
	480 014,04	803 100,41	975 413,14	975 413,14	652 326,77	803 100,41	480 014,04
	<b>2016 Contributions</b>						
	454 640,36	782 924,70	957 481,93	866 223,89	697 225,17	797 755,42	467 600,55
	<b>2016 Payment received</b>						
	-	782 924,70	978 173,98	873 467,52	-	821 238,13	467 600,55
	<b>Over (+), under payments (-) and arrears (-)</b>						
	<b>Angola</b>	<b>EU</b>	<b>Japan</b>	<b>Korea</b>	<b>Namibia</b>	<b>Norway</b>	<b>South Africa</b>
	454 640,36	-	(20 692,05)	(7 243,63)	697 225,17	(23 482,71)	-
	<b>Finale 2017 Contribution after reconciliation for over and under payments and arrears.</b>						
	Angola	EU	Japan	Korea	Namibia	Norway	South Africa
	934 654,40	803 100,41	954 21,09	968 169,51	1 349 551,94	779 617,70	480 014,04