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MoP-11-INFO-12

Southern Indian Ocean Fisheries Agreement 1st Performance Review Report

SIOFA Performance Review Panel

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Abstract	
This document is the report made by the panel that did the 1 st SIOFA Performance Review in 2023	

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² Documents available only to members invited to closed sessions.

Recommendations		
Nr	Recommendation	Priority (H/M/L)
1	The Panel recommends that the SIOFA SC is tasked with conferring high priority to the improvement of stock assessments in order to reduce uncertainty as a necessary basis for the adoption of harvest strategies. This task should be subject to a target timeline and include a process for an independent peer review of assessment methods and results.	H
2	The Panel recommends that SIOFA CCPs task the Scientific Committee with assessing the status of key shark stocks in the Area and that their status be kept under constant review over the coming years.	H
3	The Panel recommends SIOFA CCPs ensure that the fisheries summaries developed by the Scientific Committee contain clear information on the stock status of species caught in the SIOFA Area, and that this information is promptly made available to the general public.	M/L
4	The Panel recommends SIOFA CCPs assess the use of the VME Guide by observers and take action to ensure its use as required, and also implement awareness programmes targeting observers.	M
5	The Panel recommends SIOFA CCPs finalise the protocol on VME and protected area designation and speed up the process of progressing the agreed protected areas from their interim nature and identify any further areas in need for protection.	H/M
6	The Panel recommends SIOFA CCPs consider capacity building activities for developing States to undertake BFAs as per the SIOFA standards.	M
7	The Panel recommends either the deadlines for data submission under relevant CMMs or the schedule of the annual meeting of the Scientific Committee be revised to ensure the SC has the most recent data available ahead of its annual meeting.	H
--	Recommendation Nr 34 on the implementation of reporting requirements, specifically on the development of an IT-platform for the management of data and information submissions also apply to the issues assessed under this criterion.	--
8	The Panel recommends SIOFA CCPs task the Scientific Committee to develop a long-term strategic plan with identified priorities for its work and options for the use of independent consultants, academic institutions, private/public organisations and/or CCP expertise resources as feasible, taking into account funding requirements.	M
--	Recommendations nr 7, 10 and 46 concerning, respectively, the scheduling of SC meetings, the development of a framework for Scientific	--

	Advice and the management of human and funding resources for its work apply also to the issues assessed under this criterion.	
9	The Panel recommends CCPs to launch an exercise of consolidation of the various CMMs into a corpus of SIOFA rules and regulations, with the aim of codifying the applicable rules to make them clearer, easier to interpret and easier to control in terms of compliance. This exercise should identify existing gaps and possible contradictions, issues of interpretation in need of resolving, and a future structure of the corpus that allows the different actors on whom the various obligations fall (from SIOFA's own bodies, to CCP authorities, to fishers) to have a clear and user-friendly access to their applicable rules and discipline.	M
10	The Panel recommends SIOFA CCPs undertake the development of a framework for the provision of Scientific Advice that takes into account best international practices, whether or not combined with a framework for decision-making at managerial level in accordance with the Precautionary Approach. This could accompany or complement the already decided work line dedicated to the development of harvest strategies but would provide the basis for an urgent consideration of precautionary measures in the short term.	M
11	The Panel recommends SIOFA discusses with CCAMLR concrete options to co-manage toothfish stocks shared between the 2 organisations, and establishes either a prohibition of fishing for this resource outside established toothfish management units or revised the units as required so no activities escape the conservation measures established for this resource.	H
12	The Panel recommends SIOFA CCPs to urgently agree on precautionary measures regarding alfonsino in light of the significant level of catches, second in the Area by weight, and of the fact that the stocks' biological complexity makes it challenging to adopt measures other than precautionary, at least in the short-to-medium term. Effort and catches should be constrained to the lowest possible levels.	H
13	The Panel recommends SIOFA CCPs adopt precautionary measures for target stocks other than the three key stocks of toothfish, orange roughy and alfonsino.	H/M
14	The Panel recommends SIOFA CCPs engage in discussions towards a future regime for the allocation of fishing rights.	L
15	The Panel recommends SIOFA CCPs agree on a definition of new fisheries and discuss a regulatory framework for new and exploratory fisheries incorporating the highest standards derived from international best practices. The framework should make proper use of tools already developed by SIOFA such as the fishing footprint, BFIA's and VME mapping.	H/M
-	Recommendations nr 10, 12 and 13, above on the implementation of the Precautionary approach apply also for the purposes of the issues assessed under this criterion.	-

16	The Panel recommends SIOFA CCPs to make every effort to progress from the current interim arrangements for bottom fishing to permanent rules, retaking discussions on this issue from the proposal tabled in 2019 or an updated version of it. Recommendation nr 9 above, on a corpus of SIOFA rules, applies also for the purposes of the issues at stake here.	H
17	The Panel recommends the MoP requests from the SC an evaluation of the frequency of VME encounters and of the compliance of fishing vessels with the reporting and move-on rule requirements.	H
18	The Panel recommends that SIOFA CCPs expand their consideration of actions aiming at the conservation of biodiversity to fishing activities other than those using bottom gears, extending the concept of Impact Assessment to such activities as well.	M
19	The Panel recommends SIOFA CCPs to agree urgently on measures to reduce shark by-catches, in particular by implementing any mitigation measures that identified as effective by the 2023 specific workshop on sharks to take place under the aegis of the Scientific Committee, including precautionary catch limits for Portuguese dogfish. Recommendation nr 2 on the assessment of the status of shark stocks is also relevant for the issues discussed under this criterion.	H
20	The Panel recommends the SC effectively use the focused agenda item on seabird by-catch, decided by SC 8 in 2023 for future sessions, to identify necessary by-catch mitigation measures, including in trawl fisheries, as originally proposed at the time CMM 13 was adopted. SIOFA's cooperation arrangements with ACAP, but also with CCAMLR, should be strengthened including for the purposes of this work.	M/L
21	The Panel recommends SIOFA carries out a review of the effect of effort limits applicable to relevant fleets to determine whether such limits constrain the fishing activity or not, and that a clear determination is made on the potential use of capacity or effort limits as a fishery management tool, especially with regard to fisheries conducted with gears other than bottom gears.	M
22	The Panel recommends SIOFA CCPs consider incorporating the principles of a flag State performance self-assessment into their compliance monitoring scheme, including by tasking the CC with reviewing the annual national reports submitted by CCPs and currently reviewed only by the SC.	H/M
23	The Panel recommends SIOFA CCPs consider the adoption of binding application of the Port Inspection Scheme to all ports of every CCPs, without the condition to apply to those having areas of national jurisdiction adjacent to the Agreement Area.	H/M
24	The Panel recommends SIOFA adopts at least a minimum standard regarding inspection coverage of all fishing vessels carrying or landing resources of its competence which enter their ports.	H

25	The Panel recommends SIOFA CCPs investigate possible landings or transshipments of SIOFA species at ports placed under the jurisdiction of non-CCPs, and if this is found to happen, initiate demarches with the relevant port States to request they become CCPs or cooperate with SIOFA as appropriate.	H
26	The Panel recommends and encourages SIOFA CCPs to continue their efforts to agree on a SIOFA VMS in order to verify vessels activity in the Agreement Area. The Panel also recommends that CCPs adopt rules for the submission VMS data until such scheme is adopted.	H/M
27	The Panel recommends SIOFA CCPs urgently seek to clarify the various issues of interpretation affecting the implementation of several MCS measures, in particular those related to CMM 06 on the IUU vessel list, CMM 07 on Vessel authorisation and CMM 14 on the HSBI procedures, including by seeking independent legal or technical advice if necessary.	H
--	With regard to SIOFA's observer programme, and in general with regard to possible technical improvements for the standing measures, Recommendation nr 9 on a corpus of SIOFA CMMs applies also for the purposes of the issues assessed under this criterion	--
28	The Panel recommends including in the agenda of the Compliance Committee a specific standing item on follow-up actions in the framework of the CMS for the previous year or years.	H
29	The Panel recommends SIOFA CCPs agree on a review of CMM 11 on a Compliance Monitoring Scheme in order to facilitate its interpretation, taking into account the changes proposed by this Panel, including to the CCR template and the rules regarding follow up action on infringements identified in previous years.	H/M
30	The Panel recommends SIOFA CCPs task the Secretariat with an assignment as high priority for the Compliance Officer the strengthening of the Secretariat's technical capacity to examine, analyse and verify the data collected for the purposes of the Compliance Monitoring Scheme.	H/M
31	The Panel recommends that SIOFA CCPs task the Secretariat to assess the capacity building needed in order to improve implementation of their obligations by the CCPs, prioritizing the most urgent and providing options to ensure appropriate assistance is provided to CCPs which so require.	M
32	The Panel recommends SIOFA CCPs discuss the possible adoption of a new measure on a Catch Documentation Scheme, focusing, in particular, on CCAMLR's DCD, and explore options for its implementation. The Panel recommends SIOFA strengthens its cooperation with CCAMLR in this regard, including by requesting capacity building support for the Secretariat so that it can contribute to future joint work by the two organisations.	H/M
33	The Panel recommends SIOFA CCPs consider the option of developing a SIOFA Reporting Manual to replace the present table of reporting requirements provided for in the organisation's website. Suggestions as	M

	to the structure and contents have been provided in our assessment under this criterion.	
34	The Panel recommends SIOFA CCPs consider the option of establishing an IT-based data management platform taking into account the experience gained in the design and use of such platforms in other organisations, including in-built protocols for data verification, quality checks and the protection of confidential data. A decision to explore this option should only be taken if CCPs accept and assume the need for investment on capacity building as required.	H
35	The Panel recommends, in case SIOFA CCPs are not prepared to implement an IT data platform as per Recommendation nr 34, urgent action is taken to ensure appropriate data verification protocols and quality checks are established.	H
36	The Panel recommends SIOFA CCPs agree to share data regarding the implementation of their fisheries control obligations and utilise such data in the framework of CMM 11's Compliance Monitoring Scheme in order to assess whether SIOFA's control-related measures are effectively implemented.	H/M
37	The Panel recommends SIOFA CCPs consider strengthening the use of intersessional decision procedures or inter-sessional working groups to facilitate the work of SIOFA as appropriate, in order to focus MoP discussions and make better use of the time available.	M/L
38	The Panel encourages SIOFA CCPs to continue and if needed intensify dialogue on matters of concern to different CCPs, where consensus has not been achieved in order to find a common view which can be satisfactory to all CCPs. In particular, the Panel recommends to address bottom fishing activities in the Saya de Malha Bank, the scope of boarding and inspection procedures under CMM 14 and the issue of managing overlapping obligations for vessels arising from both SIOFA and neighbouring RFMOs, in particular the IOTC.	M
39	The Panel recommends SIOFA CCPs continue to review, clarify and amend as appropriate the relevant data rules or provisions so that all CCPs as well as observers and the general public have better access to data and information for the purpose of discussion and decision-making.	M
40	The Panel recommends SIOFA CCPs task the Secretariat to review the documents and materials on the SIOFA website and make necessary tunings in accordance with any new data rules on dissemination and any relevant decisions of the MoP.	M
41	The Panel recommends SIOFA CCPs engage in discussion on the rules, standards and procedures regarding the granting of CNCP status, including the clarification of the requirements for admission or CNCPs status renewal, in order to ensure a consistent reviewing approach. The adoption of clear rules as well as an application template is also	M

	recommended, providing CNCP with general instructions on the required information, actions, and any other criterion.	
--	Recommendations nr 11, 20 and 32 on the strengthening of cooperation between SIOFA and CCAMLR also apply to the issues assessed under this criterion.	--
42	The Panel recommends SIOFA CCPs consider strengthening cooperation with the IOTC, SWIOFC, SEAFO, SPRFMO, and CCSBT, as appropriate.	H
43	The Panel recommends SIOFA CCPs include a prerequisite in their consideration of CMM new or amended proposals the review of relevant measures adopted by neighbouring international organizations in order to promote a coherent approach and compatibility of fisheries management across RFMO boundaries.	M
44	The Panel recommends SIOFA CCPs consider setting up a section on the SIOFA website dedicated to SIOFA's implementation of Article 13 of the Agreement, presenting the assistance that may be provided individually or collectively by CCPs to meet the special requirement of CCP developing States including, in particular, the least developed among them, and small island developing States.	M
45	The Panel Recommends that SIOFA CCPs agree on a periodical review by the MoP of the organisation's implementation of Article 13 of the Agreement and encourage CCP developing States to proactively express their needs, challenges and special requirements affecting their contribution to SIOFA's work. The MoP may thereafter consider establishing a fund dedicated to these purposes or expanding the scope of the current one.	M/L
--	Recommendations nr 6, 31 and 34 on various areas where capacity building assistance could be provided by SIOFA also apply to the issues assessed under this criterion.	
46	The Panel recommends SIOFA CCPs urgently agree on a strategic financial planning for the medium term taking into account the costs incurred over recent years for the funding of the Scientific Committee work, and commit to a fairer sharing of these costs, including by contributing in kind CCP scientific resources.	H/M
47	The Panel recommends SIOFA CCPs discuss in depth the strategic plan presented by the Executive Secretary in 2022 but extend their discussions not just to the funding aspects of it, but also to its role. For this purpose, an analysis should be carried out of the Secretariat's degree of autonomy to identify areas where it could be allowed to operate in a more agile way.	M
48	The Panel recommends SIOFA CCPs work towards a clear agreement on the use of consultants – or not – for the offices of subsidiary body chairpersons. Were the decision taken to continue using the current contractual arrangements a robust evaluation of the workload and	H

	appropriate funding should be agreed, in order to ensure these offices can be effectively and efficiently discharged.	
49	The Panel recommends that the term of office of the MoP Chairperson be extended to 2 years at least, to ensure continuity in proceedings.	M/L



Southern Indian Ocean Fisheries Agreement

1st PERFORMANCE REVIEW



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Table of contents

LIST OF ABBREVIATIONS - CONVENTIONS	12
PART I – BACKGROUND AND KEY FINDINGS	14
A. Background	14
B. Process	16
C. Stakeholders’ input	17
D. Overview of findings	18
E. Acknowledgements	21
PART II – ASSESSMENT OF PERFORMANCE	22
1. Conservation and Management	22
1.1. Status of fisheries resources	22
1.2. Ecosystem Approach	29
1.3. Data collection and sharing	33
1.4. Quality and provision of Scientific Advice	36
1.5. Adoption of conservation and management measures	40
1.5.1. <i>Adoption of measures</i>	40
1.5.2. <i>Implementation of the Precautionary Approach</i>	43
1.5.3. <i>Allocation of fishing rights among CCPs and provisions for new entrants</i>	54
1.5.4. <i>Unregulated and new and exploratory fisheries</i>	54
1.5.5. <i>Application of uniform principles and procedures across all SIOFA fisheries resources</i>	57
1.5.6. <i>Conservation of marine biodiversity and minimisation of adverse fishing impacts</i>	59
1.5.7. <i>Minimisation of pollution, waste, discards, catch by lost or abandoned gear, catch of non-target fishery resources, impacts on associated or dependent species.</i>	62
1.6. Capacity management	66
1.7. Reporting requirements	71
2. Compliance and enforcement	71
2.1. Flag State duties	71
2.2. Port State measures	73
2.3. Monitoring, control and surveillance	76
2.4. Follow-up on infringements	83
2.5. Cooperative mechanisms to detect and deter non-compliance	85
2.6. Market-related measures	90
2.7. Reporting requirements	92
3. Decision-making and dispute settlement	96
3.1. Decision-making	96
3.2. Dispute settlement	98
4. International cooperation	99
4.1. Transparency	99
4.2. Relationships with CNCPs	101
4.3. Relationships with non-CCPs undermining the objectives of the Agreement	102
4.4. Cooperation with international organisations	103
4.5. Special requirements of developing States	105
5. Financial and administrative issues	107
	10

5.1.	Availability of resources for activities	107
5.2.	Efficiency and cost-effectiveness	110
Annex I – List of Recommendations, prioritised.		113
Annex II – Summary of Stakeholder input		121
Annex III – Performance Review Terms of Reference		132
Annex IV – Panel members short bios		141

List of Abbreviations - conventions

List of abbreviations

ABNJ:	Areas Beyond National Jurisdiction
ACAP:	Agreement for the Conservation of Albatrosses and Petrels
Agreement, the:	Southern Indian Ocean Fisheries Agreement (used to refer to the Agreement's provisions).
Area, the:	Area to which the Agreement applies
BFIA:	Bottom Fishing Impact Assessment
BFIAS:	SIOFA's Bottom Fishing Impact Assessment Standards
BPA:	Benthic Protected Area
CC:	SIOFA's Compliance Committee
CCAMLR:	Commission for the Conservation of Antarctic Marine Living Resources
CCP:	collective term including SIOFA Contracting Parties, Cooperating non-Contracting Parties, participating Fishing Entities and cooperating non-participating Fishing Entities
CCR:	individual Compliance Report submitted to SIOFA by each CCP
CCSBT:	Commission for the Conservation of Southern Bluefin Tuna
CDS:	Catch Documentation Scheme
CMM:	SIOFA Conservation and Management Measure
CMS:	SIOFA's Compliance Monitoring Scheme
CNCP:	Cooperating Non-Contracting Party
CPUE:	Catch Per Unit Effort
DAAF:	French Directorate of Food, Agriculture and Forestry, host of SIOFA at the time of writing
DCD:	CCAMLR's <i>Dissostichus</i> Catch Document
DCR:	Del Cano Rise (SIOFA toothfish management unit)
DSCC:	Deep Sea Conservation Coalition
dSCR:	Draft SIOFA Compliance Report
EAF:	Ecosystem Approach to Fisheries management
EEZ:	Exclusive Economic Zone
FAO:	Food and Agriculture Organisation of the United Nations
FAO FIRMS:	FAO's Fisheries and Resources Monitoring System
fSCR:	final SIOFA Compliance Report
GFCM:	General Fisheries Commission for the Mediterranean
GNI:	Gross National Income
HSBI:	SIOFA's High Seas Boarding and Inspection Procedures
IATTC:	Inter-American Tropical Tuna Commission
IGO:	InterGovernmental Organisation
IOTC:	Indian Ocean Tuna Commission
IUCN:	International Union for the Conservation of Nature
IUU Fishing:	Illegal, Unreported and Unregulated Fishing
MCS:	Monitoring, Control and Surveillance
MoP:	SIOFA's Meeting of the Parties
MSY:	Maximum Sustainable Yield

MoP-11-INFO-12

MU:	Management Unit
NEAFC:	North-East Atlantic Fisheries Commission
NGO:	Non-Governmental Organisation
NPFC:	North Pacific Fisheries Commission
PA:	Precautionary Approach
PAEWG:	SIOFA's Protected Areas and Ecosystem Working Group
pSCR:	provisional SIOFA Compliance Report
PSMA:	The FAO Agreement on Port State Measures
RAV:	SIOFA's Record of Authorised Vessels
RFMO:	Regional Fisheries Management Organisation
RoP:	SIOFA's Rules of Procedure
SAWG:	SIOFA's Stock Assessment Working Group (superseded by SERAWG)
SC:	SIOFA's Scientific Committee
SCAF:	SIOFA's Standing Committee on Administration and Finance
SCR:	SIOFA's Compliance Report
SERAWG:	SIOFA's Stock and Ecological Risk Assessment Working Group
SIODFA:	Southern Indian Ocean Deepsea Fishers Association
SIOFA:	Southern Indian Ocean Fisheries Agreement (used to refer to the SIOFA RFMO)
SPRFMO:	South Pacific Fisheries Management Organisation
SWIOFC:	South West Indian Ocean Fisheries Commission
TAC:	Total Allowable Catch
ToR:	Terms of Reference
UNCLOS:	United Nations Convention on the Law of the Sea 1982.
UNFSA:	United Nations Fish Stocks Agreement 1995
UNGA:	United Nations' General Assembly
VME:	Vulnerable Marine Ecosystem
VMS:	Vessel Monitoring System
WCPFC:	Western and Central Pacific Fisheries Commission
WR:	William's Ridge (SIOFA toothfish management unit)

Conventions

CMMs: SIOFA Conservation and Management Measures are cited with this abbreviation followed by the fixed number attributed to them, which was assigned in the order of their adoption. In SIOFA texts, this number is preceded by a year datum corresponding to the year in which the version of the CMM in force was adopted. Since this Report discusses at times provisions present in superseded versions of a given CMM, and for the sake of brevity, we refer to CMMs by their ordinal number only save when indicating the year is necessary or in quoted text verbatim from reports. Also for the sake of brevity, we use the shortened title of CMMs as appearing in brackets in the SIOFA website repository.

Reports: When referring to any SIOFA body report, we use the abbreviation of the relevant body (MoP, SC, CC) followed by a number corresponding to the annual session from which the information is noted. We often also cite the year the session took place for clarity.

Italics: Used to mark verbatim-quoted text.

PART I – Background and key findings

A. Background

1. The emergence of an international consensus on the need for Regional Fisheries Management Organisations (RFMOs) to assess their own performance against the objectives outlined in their statutory documents can be dated back to the early 2000's, and took shape at various events of the global fisheries governance bodies, including the UN General Assembly's work on sustainable fisheries and the Committee of Fisheries (COFI) of the FAO. In 2005, UNGA Resolution 60/31 encouraged States through their participation in RFMOs to initiate processes for their performance review and welcomed the work of FAO in the development of general objective criteria for such reviews. Calls for RFMOs to undertake Performance Reviews followed through successive years. By 2012, FAO reported in its Fisheries and Aquaculture Circular nr. 1072³, on the outcomes of a first round of Performance Reviews carried out already by 7 RFMOs, noting several other's had started also a Review process, at the time underway. By 2015, FAO Fisheries and Aquaculture Circular nr. 1108⁴ reported on the outcomes of the Performance Review Processes carried out by a total of 19 Regional Fisheries Bodies (a term which includes RFMOs and other bodies such as FAO consultative bodies and ICES). Based on the experience gained by these processes, both successive Circulars offered guidance on their conduct for use by RFMOs and RFBs which are generally agreed as reflecting best practices.
2. Many RFMOs have by now carried out a second Performance Review exercise. In the case of the Southern Indian Ocean Fisheries Agreement (SIOFA), the Organisation is among the most recently created RFMOs (together with the South Pacific Fisheries Management Organisation – SPRFMO and the North Pacific Fisheries Commission - NPFC). Both SIOFA and SPRFMO saw their establishing Agreements enter into force in 2012 and held the first meetings of their governing bodies in 2013. The NPFC Convention entered into force in 2015 and the organisation held its first annual meeting that same year.
3. The origins of SIOFA date back to the adoption of its establishing Agreement in 2006, after a development period that spanned 6 years and comprised 2 preparatory technical meetings and five sessions of an Intergovernmental Consultation process. The final Conference on the Southern Indian Ocean Fisheries Agreement took place on 7 July 2006 at the FAO Headquarters in Rome and was attended by 12 States plus the (then) European Community. The Agreement was adopted by unanimity of the parties present and immediately opened for signature. The Conference also adopted on that day a Resolution on interim arrangements for cooperation in the Agreement's Area of application while awaiting entry into force.
4. By the time the first Meeting of the Parties (MoP) took place on 18 and 19 October 2013, SIOFA counted six Contracting Parties. Membership increased progressively in the following years to reach the current membership of 10 Contracting Parties, namely Australia, China, Cook Islands, European Union, France (on behalf of her Overseas Territories), Japan, Korea, Mauritius, Seychelles and Thailand⁵. In addition, one Fishing Entity, Chinese Taipei, and two Cooperating non-Contracting

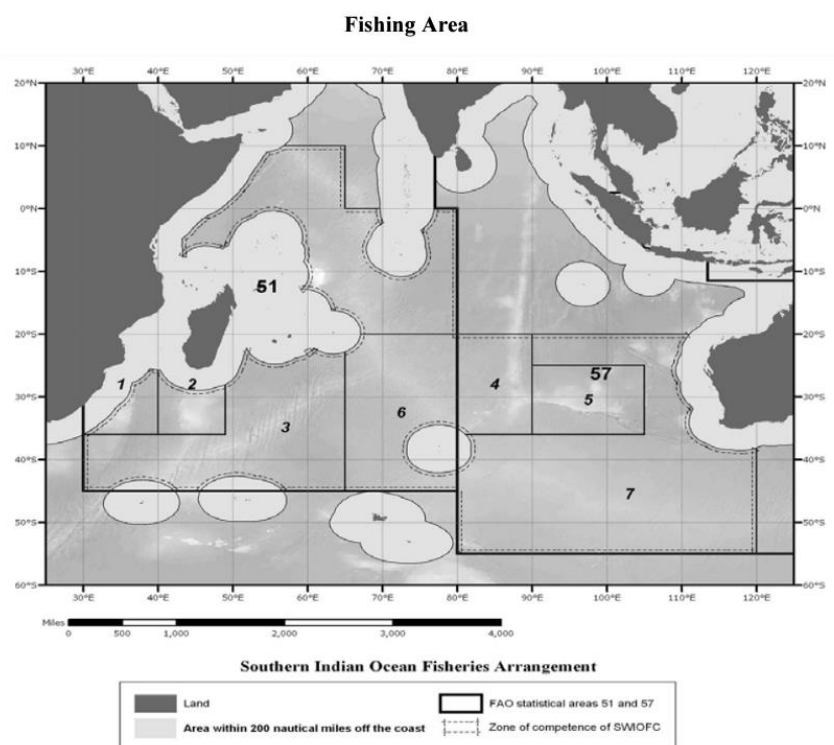
³ <https://www.fao.org/3/i2637e/i2637e00.pdf>.

⁴ <https://www.fao.org/3/i4869e/i4869e.pdf>.

⁵ The FAO, as Depository of the Agreement, keeps an official record of the Signatories and Parties thereof at https://www.fao.org/fileadmin/user_upload/legal/docs/035s-e.pdf.

Parties, Comoros and India, participate in SIOFA today. Contracting Parties, cooperating non-Contracting Parties, participating fishing entities or cooperating non-participating fishing entities are collectively referred in the SIOFA as CCPs.

5. Absent from the list above are States involved, at least at some stage, in the development of the Agreement which so far have not become Contracting Parties or cooperating non-Contracting Parties. These include signatories of the Agreement (Kenya, Madagascar, Mozambique and New Zealand) and non-signatory Coastal States (Maldives, Somalia, South Africa, and Tanzania).
6. The establishment of SIOFA created a framework for cooperation in a large area of the global marine commons till then open to practically unrestricted use by any State or Fishing Entity harvesting non-highly migratory species. SIOFA's Area of application encompasses the waters beyond national jurisdiction of FAO Statistical Areas 51 (Western Indian Ocean) and 57 (Eastern Indian Ocean), except waters north of parallel 20°S in the case of FAO Area 57, and waters north of the Equator to the east of meridian 65°E and waters north of parallel 10°N to the west of the same meridian. Within its Area, SIOFA has competence over resources of fish, molluscs, crustaceans and other sedentary species within the Area, but excluding: (i) sedentary species subject to the fishery jurisdiction of coastal States pursuant to article 77(4) UNCLOS; and (ii) highly migratory species listed in Annex I of the UNCLOS⁶.



7. The adoption of the Agreement therefore represented a significant step forward in ensuring the governance of maritime areas beyond national jurisdiction by filling a significant spatial gap in the map of the high seas subject to international cooperative arrangements towards the conservation and management of its resources. Fisheries for non-highly migratory species in the region had seen

⁶ SIOFA Agreement Article 3 (Area of Application), Article 1(f) (definition of “fishery resources”) and Appendix 2 (Map of the Area of Application).

a well-characterised “boom and bust” development over many years prior to SIOFA’s existence in the absence of any applicable regulation. Organising cooperation was therefore an imperative not just to make a collective effort to conserve and utilize responsibly fragile and depleted fish stocks, but also to protect marine ecosystems of high value and equally high vulnerability, notably those inhabiting the deep-sea ridges and seamounts of the Southern Indian Ocean.

8. This Performance Review process comes therefore at a time when SIOFA’s membership, as well as cooperating non-contracting parties (collectively referred to as “CCPs”), with almost 10 years behind them since the organisation became operational, are in a good position to assess progress made towards sustainability in the Area in accordance with the Objectives set forth in its establishing Agreement.

B. Process

9. At its 9th MoP, held 4 to 8 July 2022, SIOFA agreed to launch the process for a first Review of Performance of the SIOFA organisation over its first 10 years of activity. The Review was agreed to take place during the 2022-2023 intersessional period, so that a Report be submitted for consideration by the 10th MoP to be held in July 2023. The European Union offered to provide the necessary funding by means of a grant. The 9th MoP adopted a set of assessment criteria⁷ and Terms of Reference to guide the work of the 4 experts who would be selected for the task by consensus of the CCPs. Two among them would be external experts with experience in relevant areas of science, fisheries and marine ecosystems management and international legal and governance matters, including compliance and enforcement issues and combatting IUU fishing. The other two members of the Review Panel would be from SIOFA Contracting Parties or Participating Fishing Entities, with experience in the SIOFA context and thorough understanding of the SIOFA Agreement and Conservation and Management Measures (CMMs). Following agreement of CCPs during the 2022 intersessional period, the following experts⁸ were selected as members of the Panel:
 - Ms Fuensanta Candela Castillo, (SIOFA CCPs – European Union).
 - Mr Joseph Chia-Chi Fu (SIOFA CCPs – Chinese Taipei).
 - Ms Katherine Bernal (external - Chile).
 - Dr Hussain Sinan (external - Maldives).
10. At its first meeting, the Panel members agreed to designate Ms Candela Castillo as Panel Chairperson.
11. The Panel worked mainly by electronic means, holding 9 virtual meetings during the process, as well as 9 interviews with SIOFA staff, Officials and stakeholders who expressed a wish to make a presentation to the Panel (see section C below).
12. Finally, the Panel held a presential meeting to finalise this Report and Recommendations, at the SIOFA headquarters on 11-15 April 2023.
13. The Terms of Reference for the Review Process stipulated that SIOFA’s Scientific and Compliance Committees would consider the Performance Review Report before its submission to the MoP. This resulted in significant time constraints for the work of the Panel, since it was officially set up to start

⁷ Based in the Kobe Criteria for the conduct of RFMO Performance Reviews. See Appendix 4, FAO Circular 1108. Link to text in footnote 2.

⁸ Short bios in Annex IV.

its work by late November 2022. While the Compliance Committee meeting would take place just before the 10th MoP convened on 7 July 2023, the Scientific Committee was scheduled to convene for its 8th session from 22 to 31 March 2023. In order for the Scientific Committee to be able to consider the draft Report, the text would need to be submitted by the Panel by end of February 2023. In light of the limited time available to it, the Panel agreed to submit a first draft of the Report to the Scientific Committee, and a finalised Report in accordance with the Terms of Reference's deadline of 60 days ahead of the start of the MoP's 10th Session. Members of the Panel were also invited to observe the 8th Session of the Scientific Committee, for the agenda point corresponding to the Committee's consideration of the draft Report.

14. A draft report was submitted to the Secretariat on 24 February with a request for factual feedback from the Scientific Committee. This Final Report was formally submitted by the Panel to SIOFA CCPs on 3 May 2023.
15. The Panel had the full support of the SIOFA Secretariat Staff throughout the process and had access to all necessary documentation and information required for its assessment work.

C. Stakeholders' input

16. The Review Panel agreed as a matter of principle that assessing the performance of a multilateral organisation such as SIOFA requires the process to be inclusive and participatory, open to non-State stakeholders from both the fishing industry and civil society. This principle⁹ has been acknowledged and implemented in practice in Performance Reviews conducted by other RFMOs around the world. Accordingly, the Panel invited SIOFA stakeholders (CCPs, Observers and cooperating International Organisations who have participated in the meetings of SIOFA), to provide input via a questionnaire which the SIOFA Secretariat distributed to respondents on 24 October 2022. The first part of the questionnaire invited respondents' views on SIOFA's greatest achievements and challenges and the second part included a table allowing respondents to rank their own perception of SIOFA's Performance under each of the Criteria and Sub-criteria guiding this assessment. Respondents were also invited to provide detailed qualitative views on any criteria or sub-criteria of their choice. This exercise was conducted in accordance with the Panel's duty of non-disclosure regarding confidential information included by respondents in their contributions.
17. 8 CCPs, 2 observers and 1 cooperating International Organisation¹⁰ provided written responses to the Panel's questionnaire¹¹. Input from both types of respondents is aggregated in our analysis.
18. The Questionnaire and a summary of the input received from stakeholders is attached to this Report as Annex II.
19. In addition to the stakeholder's Questionnaire, the Panel conducted 9 interviews with SIOFA staff and officials, as well as CCPs and Observers having expressed an interest in further sharing and/or elaborating on their views via this medium:

- Mr Maubarakmad BOODHUN, Chairperson of the Meeting of the Parties

⁹ Cf. Appendix 2, third paragraph of FAO Circular 1072 (link to text in footnote 1).

¹⁰ The reply received from this respondent was limited to issues pertaining to SIOFA's performance with regard to international cooperation. Cf. Annex II to this Report.

¹¹ One further CCP excused itself for not providing an in-depth reply due to being a relatively new member of SIOFA.

- Mr Alistair DUNN, Chairperson of the Scientific Committee
- Mr Johnny LOUIS, Chairperson of the Compliance Committee
- Mr Thierry CLOT, SIOFA Executive Secretary
- Mr Pierre PÉRIÈS, SIOFA Secretariat Data Officer
- Dr Marco MILARDI, SIOFA Secretariat Scientific Officer
- Ms Fiona HARMFORD and Dr Sebastian RODRIGUEZ ALFARO – respectively, Head of Delegation to SIOFA, and representative to the SIOFA Scientific Committee, European Union
- Ms Kerrie ROBERTSON – Head of Delegation to SIOFA, Cook Islands
- Mr Ross SHOTTON, Executive Secretary, Southern Indian Ocean Deepsea Fishers Association (SIODFA)

D. Overview of findings

20. In this section, the Panel seeks to provide a summary overview of the key issues stemming from our research, as complemented by the input received from stakeholders. We cannot but agree with many of the key points arising from the latter.
21. In the Panel's view, the root for most of the challenges met by SIOFA since its inception stems from the reality underlying this Agreement: it covers a vast Area where fishing activities are limited in terms of the numbers of vessels harvesting key species, even if the volume of the bottom fishing catch taken in the Area is far from insignificant compared to other RFMOs, with around 20,000 tonnes annual catch, of which around 6,000 tonnes of main demersal species. At the same time, the risks in need of management to the Indian Ocean's marine ecosystem, in particular VMEs, are highly significant. A limited number of vessels, even a very limited number, can both harvest a high volume of catches and cause irreparable damage to VMEs, as it has been solidly established by robust scientific research. However, the primary recipients and users of SIOFA's management measures, those who must follow the rules in their day-to-day activities, are indeed a very limited fleet. Only 69 vessels were registered in the SIOFA's list of authorised vessels in 2021, 49 of which are pelagic longliners¹². It may be challenging for any national administration to make an investment in SIOFA as a high priority in the current economic environment. This reality is all the more patent when the marked differences in terms of economy size and developmental status among the membership are taken into account. It is sometimes easy to forget that RFMOs not only ensure a general, if difficult to quantify, benefit to society from the conservation of the environmental services provided by the marine environment, but also provide the fishing industry with a framework for their own economic sustainability, at a very quantifiable cost. The publicly funded cost of scientific research and the production of advice for management is one that the fishing industry benefits immensely from, no less than from the always high cost of fishery controls that seek to ensure a level playing field for the operation of the industry's business and, importantly, for investment decision-making.
22. Therefore, SIOFA represents the medium through which significant investment both in funding and man-hours human resources among CCPs are channelled for the first-line benefit of a community of economic operator which is very limited in size. The fact that the effort has been made to provide this investment testifies to the commitment of SIOFA CCPs to the general societal benefits derived from sustainable fisheries in the Area, capable of overriding a rationale for what would be a

¹² Overview of SIOFA fisheries 2022

https://siofa.org/sites/default/files/files/Overview%20of%20SIOFA%20Fisheries%202022_0.pdf.

challenging economic cost-benefit analysis. This is really noteworthy. However, it is undeniable that were not for this factual set of conditions, SIOFA could well have made progress towards a more robust array of measures quicker and with more CCPs engaged in its work. The Panel believes the longer the current state of affairs regarding CCPs engagement persists, the bigger the risk that SIOFA's progress towards a truly robust management of the fisheries under its purview may stall altogether, with grave consequences for the future of the organisation itself.

23. Our analysis shows that beyond the challenge of a recurring dilemma arising from the realities on the field just discussed, SIOFA suffers from an additional circumstance that leads to disincentives to CCP engagement. As a small organisation dealing with relatively small fisheries since not too long ago, SIOFA does not receive the kind of attention and scrutiny other RFMOs do. External pressure to perform, to demonstrate tangible results from the management decisions taken by an organisation, is a very important factor pushing members to overcome their differences and find shared approaches for progress. SIOFA's work is not widely followed beyond the limited circle of stakeholders regularly involved as observers. As a result, CCPs might not be under sufficient scrutiny to, for example, ensure consistency in their positioning under the different RFMOs of which they are members, making progress in SIOFA more difficult than it is in other fora.
24. Against that background, the Panel believes that it is of crucial importance whatever efforts necessary are made to ensure active commitment of all current CCPs and renewed efforts to bring into membership all adjacent coastal States which have not yet joined. The burden of funding the necessary science, research, management and control activities deployed by SIOFA should be fairly shared across the entire region, including through cooperation with coastal States adjacent to the Agreement Area to ensure compatible measures are adopted to manage relevant straddling stocks.
25. On two key fronts of SIOFA's activity, namely the implementation of the Ecosystem and Precautionary approaches, the Panel's findings call for a specific engagement and commitment of CCPs towards the organisation. Regarding the Ecosystem Approach, we see considerable efforts deployed to protect and conserve biodiversity in the Area, with remarkable investment in conservation tools such as impact assessments, the fisheries footprint and the mapping of vulnerable marine ecosystems in the region, even if we also find progress made so far on associated and dependent species such as deepwater sharks is limited and slow-paced. With regard to the implementation of the Precautionary Approach, however, the Panel's findings are not as positive as we would have wished them to be. One of our greatest concerns relates to the fact that fishing activities are subject to a low level of regulation for key stocks and basically no regulation for other stocks at regional level. In this respect, SIOFA is characterised – in a quite specific way compared to other RFMOs – as a forum for members to share information on national fishery management measures which, although some standards do apply at SIOFA level, are not subject to peer review or scrutiny nor guarantee a robust level playing field among the fleets. The adoption of a well-developed set of conservation measures in the area of fisheries control and enforcement, including high seas boarding and inspection procedures, can rightly be considered as a key achievement, as stakeholders do. So does the Panel as well. But in our assessment the conservation proper side of SIOFA business cannot be considered robust, especially since we do not see any actual constraints or limitations applying to fishing activities and we do not perceive a strong will among CCPs to adopt regional precautionary measures while awaiting the improvement of scientific knowledge about the state of their resources and the overcoming of the high levels of uncertainty existing today in that respect. We do not agree the information concerning these resources allows in any way a conclusion that they enjoy a healthy status. What we have learned about the history of the

Southern Indian Ocean fisheries is that the key stocks in this region have suffered an atrocious level of rapid depletion in the past, and that the stocks have never really recovered. We would wish to see SIOFA CCPs more concerned with recovering these stocks than with ensuring the current level of activities can be maintained as long as any sharp signs of deterioration aren't suddenly detected. This stance is reactive, rather than proactive, and not really consistent with the Precautionary Approach.

26. It is also, a significant finding of our assessment in this regard how fisheries other than those conducted with bottom gears, namely the pelagic fisheries targeting oilfish, have gained importance in SIOFA. Along with high levels of non-target catches which are not discarded, therefore exploited, oilfish could become the most important fishery under SIOFA in economic terms. This is a resource which might attract interest from fleets other than the single one currently conducting it, and therefore we see an opportunity and even a duty for SIOFA CCPs to manage this and the other non-key stocks with particular care and precaution.
27. In relation to these resource conservation and management issues, the Panel identifies SIOFA data processes as crucially in need of improvement, as well as data transparency. For an element which all SIOFA work largely depends on, the challenges affecting SIOFA's ability to collect and process robust, quality data accumulate with serious and disabling consequences. CCPs are very concerned about preserving confidentiality but do not seem to have a similar level of concern with data quality and the resolving of gaps which might prevent the Scientific Committee, for example, from providing more robust advice for key fisheries. On the side of compliance, the reinforcement of the Secretariat with the recent recruitment of a compliance officer should increase SIOFA's capacity in this area, as the creation of the position of the science officer in 2021 did for the Secretariat's capacity to advance scientific work. However, and again, all CCPs must demonstrate a commitment to make the investment needed to supply the data both the Scientific and Compliance Committees need for their work.
28. The Panel believes SIOFA should greatly benefit from an increased outreach to other RFMOs and to the public in general, to gain both wider support for its efforts as well as valuable input and feedback. Ultimately, SIOFA should ambition to take its rightful place along other RFMOs and relevant marine organisations striving to respond to the legitimate societal expectation at global level that States work together towards a responsible and competent stewardship of the global marine commons. Raising SIOFA's profile and attracting attention to its work, including by requesting and accepting close scrutiny, seems to the Panel a necessary first step in that direction.
29. If CCPs and other States can indeed find a renewed and strengthened commitment to this end, many of the challenges faced by SIOFA in the past – most if not all of which remain a challenge today and for the coming years – should be easier to deal with.
30. For a start, the actual conduct of the organisation's work is generally seen as satisfactory, but CCPs clearly have dissenting views as to whether having recourse to independent officials under contract is an asset or a weakness due to lack of CCP engagement. The Panel may see advantages in the hiring of independent subsidiary body chairpersons inasmuch as in theory, this allows the organisation flexibility to attract the best expertise available anywhere in the world. However, it is not in the benefit of the organisation that this option should be taken simply because no appropriate contribution from CCP's own expert human resources is made available to SIOFA.

31. CCP engagement also means that decision-making should in itself be robust. Dissent among the membership over the interpretation of its own agreed CMMs has a real bearing on their effectiveness since it may result in disparate implementation and therefore undermine the necessary level playing field for the relevant fisheries. It can also run the risk of stalling the assessment of compliance, since a dissenting interpretation from one single CCPs prevents consensus even against the reading of all others, rendering the process wholly inefficient. Whether these difficulties arise from, at times, rushed agreement on a proposed text, or on the absence of any mechanism to provide authoritative in-house legal advice, the fact remains that this is an issue that may prevent SIOFA's own management efforts from deploying their full potential. In both possible root causes for this problem, a greater CCP engagement in the preparation and conduct of meetings (including ensuring appropriate consultation with capitals as need be) and in the search for avenues or processes to overcome any such dissent is obviously indicated, irrespective of whether the matter concerns the interpretation of CMMs or more fundamental issues of a legal nature.
32. Another layer of analysis of the central issue of CCP engagement in SIOFA relates to the functioning of the Secretariat. This is an issue whose addressing requires CCPs to have a frank discussion on matters of principle which does not seem to be had so far in a sufficiently clear and structured way. SIOFA CCPs need to find agreement about the role of the Secretariat, the scope of their responsibilities, and the consistency they need to ensure between expectations and the resources available to deliver on them. The Panel would advise CCPs to be more proactive and less reactive regarding this issue.

E. Acknowledgements

33. The Panel wishes to thank the SIOFA Executive Secretary, Mr Thierry Clot, and his team for the excellent support they have provided to our work. The Panel also thanks the Chairpersons of the SIOFA MoP and subsidiary bodies, as well as all SIOFA stakeholders for their input and feedback. The Panel has found this Review process to be an interesting and enriching experience.

PART II – Assessment of performance

Foreword

In this part of the Report, we follow the structure of the Assessment Criteria adopted by the MoP for this Review Process and listed in the Terms of Reference, attached to this Report in Annex III. We deal in succession with the 5 assessment areas and examine under each of them the various general criteria listed. Each general criterion contains sub-criteria for assessment. However, we have made the choice to use these to provide guidance for our discussion and recommendations rather than creating specific sections for each of them, although we do discuss all issues concerned as required. Such issues are recurring often under several different criteria. We have tried to prevent as much as possible the many reiterations of topics in this Report that may arise from their analysis from each criterion's particular perspective. Our approach, however, has one exception. We have dedicated a specific sub-section to each of the sub-criteria listed under the general criterion on the adoption of conservation and management measures (Section 1.5). This is indicated, in our view, because of the richness and complexity of the issues touched upon under each of the 7 sub-criteria in question. For them, therefore, an assessment and recommendations under each is provided, rather than at the end of the general criterion Section, as we do for all other cases.

This part of the Report takes into account the results of the 8th Session of the SIOFA Scientific Committee, which contains a specific section providing input to the Panel for the purposes of this Performance Review on matters of its competence.

Finally, before proceeding to our detailed review of the state of play and assessment against the assessment criteria for this Performance Review, the Panel wishes to issue a **general procedural recommendation** "nr 0", with priority level high, that SIOFA CCPs agree on a clear process for the follow-up of this Performance Review process including at least the following elements:

1. *A formal decision on which Recommendations are accepted by the MoP;*
2. *a plan for implementation with time targets;*
3. *a regular, periodical review of implementation of such accepted Recommendations;*
4. *a reiteration of the Performance Review process within an appropriate time frame, which we would recommend could be 5 years from now, given the fact this Review is the first such process carried out by the organisation.*

It is established practice that RFMOs engage in Performance Review process on a regular basis. If SIOFA indeed agrees to renew this process within an agreeable timeline, it will be necessary to check progress against accepted recommendations. A follow-up progress will greatly facilitate the conduct of future Reviews.

1. Conservation and Management

1.1. Status of fisheries resources

34. The Southern Indian Ocean Fisheries Agreement (SIOFA) is mandated to manage resources, including all resources of fish, molluscs, crustaceans and other sedentary species within the Area, excluding the sedentary species subject to fisheries jurisdictions of coastal States and highly migratory species listed in Annex 1 of UNCLOS. Even though, the list of species under SIOFA's purview is vast, there are only few primary target and non-target fisheries conducted in the Area

at the moment. Around 40 - 65% of the total catches in SIOFA comprise alfonsino (*Beryx splendens*), orange roughy (*Hoplostethus atlanticus*), Patagonian toothfish (*Dissostichus eleginoides*) and oilfish. In recent years, catches for hapuka wreckfish (*Polyprion oxygeneios*, *Polyprion americanus*, and other *Polyprion* species) have increased significantly (from around 25 t in 2016 to around 225 t in 2020)¹³.

35. SIOFA has conducted three stock assessments (two stock assessments for orange roughy and one for alfonsino - Table 1). However, the results of these stock assessments are limited due to the lack of historical data, uncertainties over the accuracy of the data, and intrinsic biological complexities of the species. Even though SIOFA has asked CCPs to submit their historical catch data, the data has been submitted in different scales and its utility in stock assessments is limited.

Table 1: Stock status of key fisheries of SIOFA

Fishery	Assessment Area	Status	Recent catches	Last Stock Assessment Year	Stock assessment frequency
Orange roughy	North Walter's, West Walter's, Walter's Shoal, Ridge, Seamounts and Meeting (collectively called the Long Walter's Shoal Ridge)	Stocks are about 62% of their pre-exploitation spawning biomass. Current exploitation is sustainable with a low probability ($p = 0.25$) of the stock being overfished.	From 2015 to 2020, on average 647.4t	2022	Every 3 – 5years (next in 2025)
	North Ridge, Middle Ridge and South Ridge (collectively called the Long Eastern Ridge)	The SC did not except the surplus production model and as a precautionary measure advised the MoP to maintain current fishing levels.	From 2015 to 2020, on average 968.1t	2022	Every 3 – 5years (next in 2025)
Alfonsino	East of 80° (Sub areas 1, 2, 3a, 3b, and 6)	Stocks are at about 60% of their pre-exploitation spawning biomass. Further spawning biomass projected to be above MSY even if 2018 catch continues. The SC recommended that the MoP, in light of the uncertainties around the stock assessment, should take a cautious approach when applying the results.	From 2014 – 2018, on average 706.18t	2022	2026
	West of 80° (Sub areas 4, 5 and 7)	Stocks are at about 60% of their pre-exploitation spawning biomass. However spawning biomass projected to be decline slightly than MSY even if 2018 catch continues. The SC recommended that the MoP, in light of the uncertainties around the stock assessment, should take a cautious approach when applying the results.	From 2014 – 2018, on average 3,400.1t	2022	2026
Patagonian toothfish	No stock assessment	Status unknown	around 80t in 2020	NA	NA
Oil fish	No stock assessment	Status unknown	around 2800t in 2021	NA	NA

36. SIOFA has not conducted so far a stock assessment for toothfish, as there is no clear direction from the SC or the MoP on how to deal with the management of this species. The catches of toothfish are on the decline, having reached their peak in 2018 at around 480 t, down to 160 t in 2021¹⁴. The unstandardised catch per unit effort level has remained stable during these four years. Even though there are disagreements among some of the CCPs, the SC assumes since its first meeting (SC 1 Report, Paragraph 77) that the toothfish caught in the SIOFA area (mainly, but not necessarily only in the 2 Management Units (MUs) defined in CMM 15 on the management of demersal stocks, i.e., Del Cano Ridge (DCR) and William's Ridge (WR)), comes from populations straddling the SIOFA and CCAMLR Areas. CCAMLR also believes, based on tagging and other

¹³ SIOFA 2022. *Overview of SIOFA Fisheries*.

https://siofa.org/sites/default/files/files/Overview%20of%20SIOFA%20Fisheries%202022_0.pdf

¹⁴ *Ibid*.

information, that the toothfish caught in SIOFA is part of the same stock as managed by CCAMLR, for which robust stock assessments and well-defined catch limits are in place. Catches in SIOFA may jeopardise such efforts by CCAMLR¹⁵. In order to improve the understanding of the stocks by both organizations, an arrangement was concluded in August 2018 with CCAMLR to exchange data and scientific information, harmonise approaches and collaborate in data analysis and research efforts¹⁶. A joint workshop was also held in November 2021 to discuss the exchange of scientific data and to develop a toothfish tagging protocol for the SIOFA Area consistent with that of CCAMLR.

37. Toothfish catches on the SIOFA part of the WR are likely to result in total fishing mortality exceeding the fishing mortality used by CCAMLR to determine the catch limit and may undermine the CCAMLR management objectives for this toothfish population. This SIOFA MU is adjacent to CCAMLR's Statistical Division 58.5.2. for which CCAMLR Conservation Measure 41-08 (2021) applies¹⁷, including among various other provisions, a TAC limit of 3,010 t per season (2021-22 and 2022/23). For the DCR toothfish fishery, SC 4 noted in 2019 a dramatic increase in catches from 2016 to 2018. The Del Cano Rise feature straddles SIOFA, CCAMLR, the French and South African EEZs. SC 4 agreed the population fished in SIOFA is the same as regulated by CCAMLR on the southern section of the DCR. Furthermore, SC 7 in 2022 noted (paragraph 102) that there is an area of toothfish fishing beyond the DCR MU boundaries, i.e., in a part of the Rise where the TAC established under CMM 15 does not apply. In examining a preliminary analysis of the toothfish fishery data in DCR in 2020, the SC noted (paragraph 127) that high effort periods and catches appear to have an effect on the local density of toothfish in the region. However, the MoP did not discuss this issue either in 2021 or 2022. SC 8 discussed in 2023 work towards the assessment of toothfish stocks, *including the development of additional stock monitoring and data collection plans* (paragraphs 141–155 and 335.iii). The recommendations issued in this regard concern actions SIOFA needs to implement with regard to, in particular, data collection and research, and also refer to the possible use of CCAMLR trend analysis rules. It is our understanding of this very recent work of the SC as relying on mainly SIOFA resources to conduct future work on toothfish stocks, rather than considering an option of a SIOFA-CCAMLR co-management approach.
38. Alfonsino is mostly caught in the western SIOFA Area, mainly subareas 1, 2, 3a, 3b, 4 and 5. The majority of fishing effort and catch have occurred in the West area (subareas 1, 2, 3a and 3b). Catches of alfonsino have fluctuated between about 3,000 and 5,000 t between 2013 and 2021 with the average annual catch in recent years (2017–2021) being approximately 4,000 t. During these years, up to three vessels participated in the SIOFA alfonsino fishery and the effort has decreased during this period. SIOFA conducted an assessment in 2020 for two management units: one for the “east” stock and one for the “west stock”, based on age-structured production model fitted to catch histories and standardised CPUE time series. The assessment concluded that both stocks were not overfished or subject to overfishing. Due to limited data availability, the SC has recommended additional research to better define the stock structure, and standardised data collection to improve estimation of ageing and biological parameters.

¹⁵ See also Section 1.5.2, below.

¹⁶ See: *Arrangement between the Meeting of the Parties of SIOFA and CCAMLR*

https://siofa.org/sites/default/files/files/Arrangement%20between%20SIOFA%20%26%20CCAMLR_0.pdf

¹⁷ <https://cm.ccamlr.org/en/measure-41-08-2021>

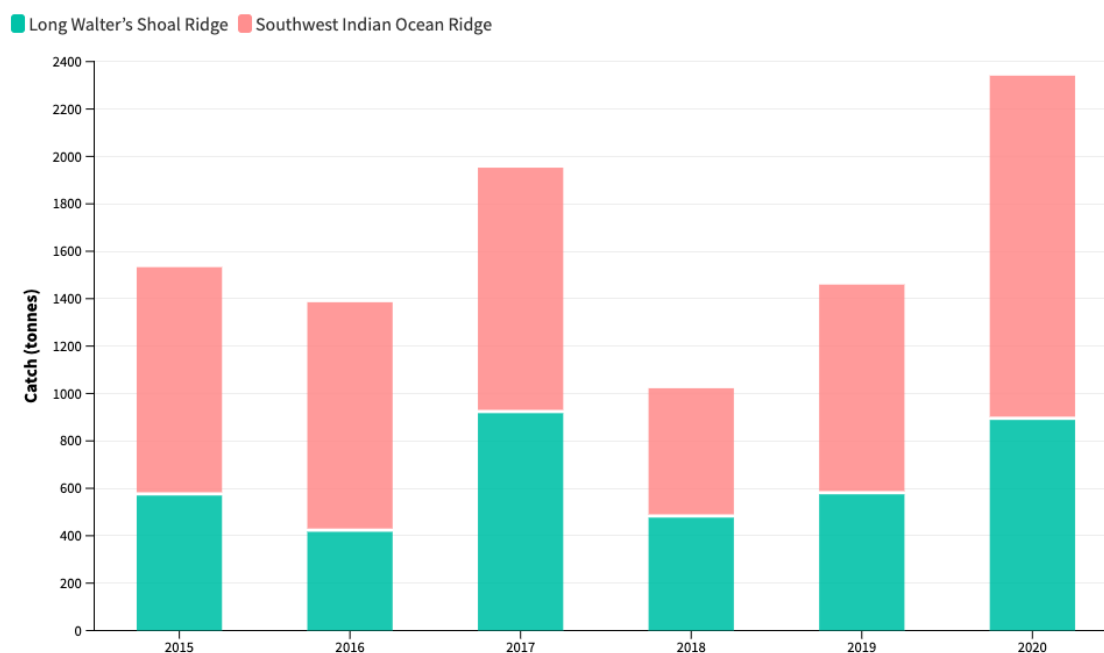


Figure 1: Catches of orange roughy in Long Walter's Shoal Ridge (Green) and Southwest Indian Ocean Ridge (Red) from 2015 – 2020 (Source: SIOFA Secretariat)

39. Orange roughy catches have increased over the last three years despite declining fishing effort (effort fell sharply until 2020 and is on the rise again). Orange roughy resources are distributed across SIOFA subareas 1, 2, 3a and b¹⁸. The SC has so far conducted two stock assessments for orange roughy. In the latest stock assessment (SC 7, 2022), the consultants recommended that SIOFA considers a simplified spatial split of the SIOFA sub-areas, reducing the management units to 2, the Long Walter's Shoal Ridge (Long WSR) and the Long Eastern Ridge¹⁹. However, SC 7 (paragraph 83) had concerns whether a split as recommended would fit the biological and ecological reality of the orange roughy fisheries. In the Long WSR, catches consistent with MSY were estimated at 3,276 t (at poor statistical precision, 215.7% CV). The average catches of orange roughy in the Long WSR from 2015 to 2020 were around 647.4 t and are on the increase since 2018. In the Long Eastern Ridge, catches consistent with MSY for orange roughy were estimated at 616 t but with better statistical precision (88.8% CV). However, catches between 2015 and 2020 were on average 968.1 t²⁰ and in 2020, catches have climbed up to 1,445.4 t (more than doubling the estimated MSY level in the stock assessment). MoP 9 rescheduled the next stock assessment for orange roughy in 2025, rather than 2027 as originally planned due to the concerns raised by the SC 7. In SC 8, a technical sub-committee was created to advise the SC on the stock assessment for orange roughy.
40. Oilfish is mainly harvested by Chinese Taipei with minor amounts of bycatch by other CCP fleets. Oilfish was a bycatch in large-scale tuna longline fishing operations prior to 2015. However, parts of Chinese Taipei's tuna longliners shifted to the southwest Indian Ocean to fish oilfish after 2005 and the number of vessels targeting these species has varied between 9 and 51 ever since. There

¹⁸ SIOFA has not yet formally adopted management units for orange roughy, although these subregions have been historically referred to as "Management units for assessment purposes".

¹⁹ SIOFA 2022, *Report of the Fourth Meeting of the SIOFA Stock Assessment and Ecological Risk Assessment Working Group (SERAWG)* <https://siofa.org/sites/default/files/documents/meetings/SERAWG4-Final-Report.pdf>, paragraph 51.

²⁰ Rubén H. Roa-Ureta et al. 2022, *Stock Assessment of the orange roughy (Hoplostethus atlanticus) under management by the Southern Indian Ocean fisheries Agreement (SIOFA) 2000 to 2022* (Restricted).

are 49 Chinese Taipei-authorized vessels targeting oilfish within the SIOFA area in 2021²¹. Oilfish has been SIOFA's resource with the highest volume of catches in recent years, decreasing to second largest in 2021 after alfonsino²². There is no assessment nor standardised CPUE developed for the fishery. However, at SC 8, Chinese Taipei agreed to estimate a standardised CPUE index and will report to the SC 9.

41. Shallow-water snappers, emperors, groupers, saurida, scads and other species are also caught in the Saya de Malha Bank (2,000 t in 2020), an ocean bank located within the Area. The management of the species caught in bottom trawling in the Bank has remained unresolved, with differences in views still standing with regard to the legality of the SIOFA Agreement's implementation in the extended continental shelf to which this Bank belongs (MoP 9, paragraph 76 – 78). Furthermore, several countries fishing in the area are non-members of SIOFA²³.
42. The absence of a definition by the SC – until its 8th session in 2023 – for target species by gear in SIOFA fisheries has resulted so far in some degree of ambiguity in the management of species. The amount of shark bycatch has remained a concern in particular in sub-area 2, where it reaches almost 4 times the volume of the targeted species catch in demersal longline fisheries for the past 9 years. It is encouraging that a scientific workshop was conducted in 2022, based on the MoP 9's decision to assess the stock status of shark species caught in SIOFA fisheries and discuss potential measures to reduce shark bycatch further. SC 5 in 2020 had noted (paragraph 143) that several species *reported to have been commercially targeted in the Area are assessed as being at high or extreme risk to fishing*. However, the identification, distribution, stock structure, biology and life history of several deep-water sharks needs improvement (paragraph 151). SC 8 has recommended in 2023 several measures including catch (bycatch) limits as well as other input and output control measures to initiate the management of deep-water sharks based on the workshop discussions. In addition, significant amounts of “tunas *nei*” is recorded as a bycatch in pelagic longline in the SIOFA Area to the Secretariat and significant catch of SIOFA species are reported as bycatch to the IOTC Secretariat. There are concerns that the records of tuna catches might not be reported to the Indian Ocean Tuna Commission, which has established catch limits for some species of tuna²⁴.
43. Some CCPs with significant activities in the Area have not submitted data in their annual national report to the SC on a regular basis. However, there are encouraging signs, as one of the CCPs which had not submitted a national report since SIOFA's inception did submit a national report to the MoP in 2022 and also committed to submit any other outstanding reports as soon as possible. It is encouraging that the quality and the level of detail in the national reports continue to improve. SC 8 further agreed to continue to review and improve the guidelines at each year's session as a standing agenda item. Furthermore, the templates for the national report now include examples of best practices for national reports.
44. Even though there are significant gaps in the understanding of stock structure, stock status, stock assessment framework and the fisheries characterisation in SIOFA, the MoP has decided to undertake the development of management strategy evaluations and harvest control rules. In that regard, a two-day harvest strategy pre-assessment workshop has taken place in 2023 prior to SC 8, with the participation of scientists, managers, industry representatives, and observers,

²¹ Overview of SIOFA Fisheries 2022, Table 1.

²² See Table 4 in Section 1.5.5, below.

²³ SIOFA Saya De Malha Bank Scoping Study (Restricted). The issues surrounding the conduct of fisheries in the Saya de Malha Bank are discussed in several sections of this Report, as it has implications for various assessment criteria guiding this Review.

²⁴ Ross Analytic, 2022. *Management of other ecosystems* (Restricted)

to: i) discuss the planning and implementation of the harvest strategy development roadmap; ii) interpret the data; iii) identify data gaps for informing a stock assessment; and iv) discuss which stocks are to be assessed²⁵.

ASSESSMENT

45. As to the Panel's assessment of the status of the fisheries resources under the purview of SIOFA, the Panel underlines, to start with, how stakeholder input into this Review reveals a significant divergence of views. Some believe the stocks are doing well while others believe they are doing poorly. However, in reality, very little information is available on the status of the SIOFA stocks. Even though SIOFA has conducted stock assessments for orange roughy and for alfonsino, the outputs from these stock assessments are limited due to scarcity of historical catch, effort data, size data and tagging data. Alfonsino and orange roughy stocks in Long Eastern Ridge are assessed as fished below the MSY levels. However, the orange roughy stock in the Long WSR is fished higher than MSY and catch has increased significantly in the last few years. There are no stock assessments yet for oilfish nor for other species caught in the Area. SC 8 has started a process towards the assessment of the oilfish stock in 2023 by discussing the development of a standardised CPUE index for this species. Broadly, there is no clear information on stock status for any of the species provided by SIOFA to the public. The Overview of SIOFA fisheries published annually by the secretariat and approved by the SC and the MoP, only consists of general trends of SIOFA stocks. The stock summaries and the ecosystem summaries developed by the SC should hopefully share some light in making this information public. In 2023, SC 8 has made progress in this respect by developing fisheries summaries for a large number of *species including alfonsino; Patagonian toothfish; oilfish and escolar; hapuka, hapuku wreckfish, wreckfish; and terakihi; and has recommended the development of a fisheries summary for common mora [and the associated bycatch of Portuguese dogfish (SC 8, paragraphs 71-79, 85 and 335.ii)*. At this time, however, only the orange roughy fishery summary is ready for publication. The rest of the species summaries are expected to be readied for publication over the coming year. The Panel welcomes this work by the SC and believes the fisheries summaries should be made publicly available.
46. With regard to trends in resources' status, although there is general agreement that the toothfish stock in the 2 SIOFA MUs come from populations straddling the SIOFA and CCAMLR Areas, since the early days of SIOFA, the work to establish common protocols, information exchange and decision-making in respect of this resource have progressed at an alarmingly slow rate. Meanwhile, the catches of toothfish have declined drastically from 480 t in 2018 to 80t in 2020. SIOFA needs to speed up this work to harmonise, cooperate and collaborate with CCAMLR in the management of toothfish. The assessment and relevant recommendations pertaining to this cooperation are discussed also in Sections 1.5.2 and 4.4, below.
47. As to the status of other species, we note sharks catches in SIOFA are four times higher than the targeted stock in demersal longline fisheries. However, SIOFA has been unable to agree on classifying sharks as a target stocks due to the lack of an agreed definition of target stocks. SC 8 has discussed in 2023 the definitions of target and bycatch species and recommended an interim species designation table to the MoP (SC 8, paragraphs 204-209 and 335.vi. Table in Annex I). The definition is made fishery by fishery as species targeted in some are by-catch species in others. Sharks are listed as by-catch species in all cases. Some species are listed as retained, others as discarded depending on the fishery. The Panel welcomes this work, but notes it does not dispel any uncertainty as to whether certain species of sharks are actually targeted or not, in contravention of CMM 12, an issue discussed further below in Section 1.5.7 of this Report. It is

²⁵ Harvest strategies and their role in respect of the Precautionary Approach are further discussed in Section 1.5.2, below.

also encouraging that the SC has for the first time recommended management measures for some of the deep-water sharks. For other stocks, available information is very limited in respect of the characteristics and operation of the fishery, as well as, specifically, scientific information about the status of the stocks and the impact of these fisheries on the marine environment.

48. The Panel is also of the view that SIOFA needs to speed up finalising an arrangement with IOTC to establish appropriate cooperative mechanisms, as tuna catches reported in SIOFA fisheries may not be reported to IOTC and SIOFA species caught in IOTC fisheries may not be reported to SIOFA. There is also an overlap of competence²⁶ between SIOFA and CCSBT. SIOFA should explore the need to establish cooperative mechanisms, including data exchanges, with this other RFMO.
49. The Panel recognises SIOFA's current approach to the development of management strategy evaluations and harvest control rules, even though there is still a lack of understanding of the stock structure, stock movement, catch and effort and even a proper stock assessment for key species. A Harvesting Strategies workshop has taken place ahead of SC 8 in 2023. Operational conclusions from this workshop have been endorsed by the SC and recommendations have been issued to the MoP on various avenues for action, including the adoption of interim stock-specific reference points, candidate Harvest Control rules for toothfish, and the development of strategies *for orange roughy and toothfish as a first step but also for alfonso and other primary SIOFA species*. The SC is also asking the MoP to make a request for advice *on additional SIOFA species that would be amenable to the development of monitoring programmes and harvest strategies* (SC 8 Paragraphs 163-183). It will be for MoP 10 – which convenes after this Report is submitted – to decide on these recommendations. The Panel assesses the SC recommendations as positive. It is our understanding that the approach followed by the SC is to propose to the MoP reference points and harvest control rules as interim while working further on harvest strategies. The Panel is unable to assess the results of these SC decisions at this time, but assumes this is a good step forward which, if confirmed by CCPs, should become a key point for assessment in future reiterations of the SIOFA Performance Review process. In the meantime, it is our assessment that SIOFA's urgent need lies in producing robust stock assessments with a much lower degree of uncertainty as they suffer from today. And among such efforts, the status of key shark stocks should be given due attention.

Nr	Recommendation	Priority (H/M/L)
1	The Panel recommends that the SIOFA SC is tasked with conferring high priority to the improvement of stock assessments in order to reduce uncertainty as a necessary basis for the adoption of harvest strategies. This task should be subject to a target timeline and include a process for an independent peer review of assessment methods and results.	H
2	The Panel recommends that SIOFA CCPs task the Scientific Committee with assessing the status of key shark stocks in the Area and that their status be kept under constant review over the coming years.	H
3	The Panel recommends SIOFA CCPs ensure that the fisheries summaries developed by the Scientific Committee contain clear information on the stock status of species caught in the SIOFA Area, and that this information is promptly made available to the general public.	M/L

²⁶ The CCSBT competence is not determined by area, but by species.

1.2. Ecosystem Approach

50. The Area under SIOFA's purview is rich in biodiversity, especially in terms of VME indicator taxa, with an observed species richness of 1,921 species and an estimated total richness of 2,906 species²⁷. SIOFA conducted a study to understand the spatial distribution and bioregionalization partitions for species management²⁸. The VME taxa indicator data in SIOFA is both limited and spatially aggregated and the taxonomic resolution of biological data is at generic levels for areas of interest. Thus, any VME conservation decision must be based on predictive modelling approaches, with considerable uncertainties. The preliminary analysis detected three biogeographical regions at the first hierarchical level (the upper and lower bathyal, the abyssal and the Southern Ocean), and eight nested biogeographical regions at the second hierarchical level²⁹.
51. The SIOFA observer report database clearly illustrates the scarcity of data regarding occurrences/interaction with VMEs in the course of fishing operations. The database currently includes 1,549 records/occurrences from 2003 to 2022, recorded during the fishing activities of 6 SIOFA CCPs (Table 2). Apart from insufficient data in the database, there were several issues identified in the processing of these reports into the database and even in the recording of data by observers. Incidental captures of VME indicator species are reported predominantly in bottom trawls, with occasional records being reported for midwater trawls. Occurrences are also reported in bottom longline fishing, but usually these consist of small weights of VME taxa species compared to those reported in trawls³⁰.

Table 2: Invertebrate taxa recorded as incidental captures in SIOFA fisheries, presented in order of decreasing total weight and including the number of occurrences (source: SIOFA Observer database). Lowest taxonomic resolution. Some taxa were not aggregated as they were either minor contributors to total weight, unclassified or already aggregated at a high level.

Phylum/Subphylum	Total weight (kg)	Occurrences
Anthozoa (corals)	8,387.80	1,008
Porifera (sponges)	2,258.57	203
Vertebrata (vertebrates)	79.39	32
Echinodermata (sea urchins, sea cucumbers and stars)	49.11	164
Hydrozoa (jellyfishes)	71.22	106
Briozoa	2.75	10
Others	1,018.08	69

52. UNGA Resolution 64/72 called upon States and RFMOs to implement measures in accordance with the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas³¹ and considered that fishing should not be permitted until impact assessments have been carried out and made publicly available³². SIOFA has referred to the UNGA calls since very early times and adopted a set of Bottom Fishing Impact Assessment Standard (BFIAS) under CMM 01

²⁷ Leroy et al, 2022 *SIOFA bioregionalization and VMEs Project* (Restricted).

²⁸ https://siofa.org/sites/default/files/files/VMEMapping_FullReport.pdf

²⁹ *Ibid.*

³⁰ Draft SIOFA Ecosystem summary (Restricted).

³¹ FAO, 2008., International Guidelines for the Management of Deep-Sea Fisheries in the High seas, <https://www.fao.org/docrep/011/i0816t/i0816t00.htm>

³² Paragraphs 113 *et seq.* Of UNGA Resolutions 64/72 - <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N09/466/15/PDF/N0946615.pdf?OpenElement>

on interim management of bottom fishing in 2017³³. The BFIAs are consistent with the FAO Guidelines. They provide a basis for assessing the potential impacts of proposed bottom fishing activities on VMEs, deep-water fish stocks as well as associated and dependent species, taking into consideration past fishing activity and the cumulative impacts of different fishing gears. The standards are used by SIOFA CCPs in preparing the required national bottom fishery impact assessments (BFIAs) and also guide the SC in their review. All SIOFA CCPs conducting bottom fishing activities have developed a BFIA³⁴. SIOFA carried out a gap analysis of BFIAs in 2019 and noted several inconsistencies and issues across all the BFIAs such as absence of clearly described information on cumulative impacts, inconsistencies in mapping all known VMEs, mapping of the results of predictive habitat modelling for VMEs, determination of level of risk and impacts on the status of deep-sea stocks to be fished. The SC in 2019 noted (Annex R) that some CCPs lack the capacity to conduct BFIAs against the standards and the gap analysis clearly illustrates the need for capacity building. Notwithstanding, SC 6 concluded in 2021, after a review of re-submitted BFIAs, that all of them are compliant with the BFIAs (paragraph 93)³⁵. SIOFA has also developed an overall BFIA for the Area, discussed in more detail in Section 1.5.6, below.

53. An overall assessment of the bottom fishing impact for trawl and longline gears in the Area was presented at the 2021 and 2022 meetings of the PAEWG and the SC. Results indicated that the cumulative bottom fishing impact of trawl and longline gears on stony corals, *Demospongiae* and *Hexactinellida*, and on *Anthiparia* is expected to range from 0.4% to 1% on average in 2020 in the various SIOFA subareas and reach up to a maximum value of 13% in a single one-degree cell when not corrected for fishable depth, or 100% when corrected for fishable depths. The SIOFA subarea found to be most impacted was subarea 2 followed by subareas 3a, 3b and 4. When considering fishable areas at the cell level, 48% of subarea 3b and 45% of subarea 2 have been fished by trawl and longline gears since 1998 at the 0.1° resolution, whereas 88% of subarea 8 has been fished at the 1° resolution³⁶. Following this work, the SC recommended that VME characteristics, in particular sensitivity to fishing gear, recovery rates and likely stock recruitment relationship be discussed, and values agreed.
54. In 2017, MoP 4 adopted a *SIOFA standard protocol for future designation of Vulnerable Marine Ecosystems and Protected Areas* to aid the PAEWG and the SC to provide structured advice on protected area designation (paragraph 12). The protocol was applied in the following year by the SC and provided advice to the MoP to designate 5 out of 8 protected areas and to revise the protocol based on the testing experience (SC 3, paragraph 165). However, after disagreements over the application of the protocol, the MoP agreed to revise and label it as an interim protocol and to designate the protected areas as interim protected areas (MoP 5, paragraphs 34 -47)³⁷. The SC provided a revised protocol the following year but was not adopted by the MoP (MoP 6, paragraph 44 - 46). The MoP could neither agree on the proposed research and management plans for these designated interim protected areas. Notably, the catches in these interim protected areas significantly decreased with the prohibitions of all bottom fishing gears. Splendid alfonsino and kitefin shark significantly contributed to the catches prior to 2018³⁸.
55. In 2020, SC 5 acknowledged, based on a study by France OT, the existence of depredation by whales in the SIOFA area and the impact the depredation can have on toothfish assessment and

³³

https://siofa.org/sites/default/files/files/SIOFA%20Bottom%20Fishing%20Impact%20Assessment%20Standard%20%28BFIAs%29_0.pdf

³⁴ <https://siofa.org/management/bf-impact>

³⁵ See also Section 1.5.2 on the role of BFIAs regarding the Precautionary Approach.

³⁶ Mormede, Sophie, 2021., *Calculating bottom fishing impact for trawl and longline gears in SIOFA*, (Restricted).

³⁷ See also Section 1.5.2 on this issue in relation to the Precautionary Approach.

³⁸ Draft Ecosystem Summary (Restricted).

estimated biomass in SIOFA area (paragraph 127). In 2021, SC 6 advised the MOP to adopt the protocol for documenting all interactions with marine mammals and for collecting photo-identification data for all vessels (paragraph 112). On advice from SC 7, in 2022 the MoP has shown interest in participating in the Important Marine Mammal Area (IMMA) designation process (paragraph 84) to ensure that fishing in areas of particular importance to marine mammals are managed accordingly.

56. The Agreement on the Conservation of Albatrosses and Petrels (ACAP) carried out an assessment of seabird bycatches in SIOFA which was presented to SC 7 in 2022³⁹. The assessment noted that out of the 18 species of albatrosses and large petrels whose distribution overlaps the Area, the International Union for Conservation Nature (IUCN) currently lists, 1 as critically endangered (CR), 6 as endangered (EN), 4 as vulnerable (VU), 4 as near threatened (NT) and 3 as least concern (LC).
57. The ACAP further noted that among the 18 species, 10 are declining, 2 are considered as stable, 2 as unknown and 4 as increasing. SIOFA has concluded an MoU with ACAP to exchange information and develop systems for collecting and analysing data⁴⁰. The highest risk seabird species include critically endangered albatrosses, whose range of distribution has an important overlap with the zones in which pelagic longline fisheries are conducted in SIOFA subareas 1, 2, and 3b (west of 40°E).
58. SIOFA has been working on the development of a fishing footprint for several years. This work has progressed somewhat slowly due to differences in view on the purposes and uses of the footprint in SIOFA among and between scientists and CCPs. In 2022, MoP 9 agreed an interim bottom fishing footprint at 20' +30' square resolution (paragraph 111). The Secretariat and CCPs continued to work to verify the footprint and finalised it in 2023. The footprint endorsed by SC 8 will be considered by MoP 10, which will convene after submission of this Report⁴¹.
59. In 2020, the FAO conducted a review of the application of its Technical Guidelines on the implementation of the Ecosystem Approach to fisheries management in areas beyond national jurisdiction, reviewing the action taken by RFMOs in this respect. The FAO report of this review⁴² noted several gaps in the case of SIOFA, such as the lack of non-benthic direct impacts, information on cumulative impacts, social or economic issues at either the vessel or industry level, climate and external drivers impacting the fisheries and ecosystem and the lack of cohesive management tools (figure 2).

³⁹ <https://siofa.org/sites/default/files/documents/meetings/SC-07-INFO-10-ACAP-spp-summary-and-mitigation-BPA.pdf>

⁴⁰ <https://www.acap.aq/documents/mous/3310-mou-between-the-meeting-of-the-parties-to-siofa-and-acap-secretariat/file>. See also Section 4.4, below.

⁴¹ See also Section 1.5.4, below, for details on this issue and the role of the footprint in the regulation of new and exploratory fisheries.

⁴² Fletcher, W.J. *A review of the application of the FAO ecosystem approach to fisheries (EAF) management within the areas beyond national jurisdiction (ABNJ)* <https://www.fao.org/3/cb1509en/CB1509EN.pdf> Food and Agriculture Organization of the United Nations.

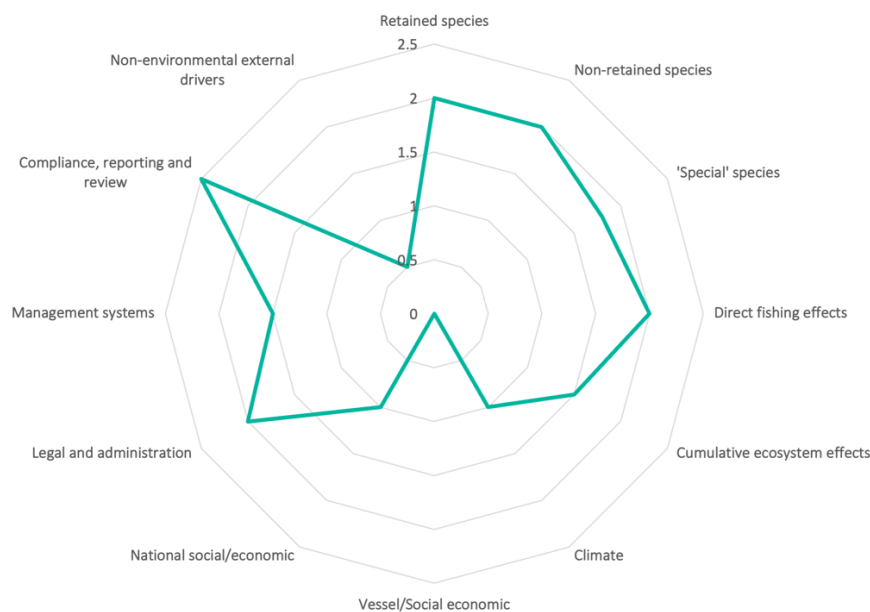


Figure 2: Summary of EAF implementation by SIOFA (where 1 = partly, 2 = mostly and 3 = fully: Source: FAO Review of Ecosystem approach to fisheries management in ABNJ)

ASSESSMENT

60. SIOFA's Area is vast and rich in biodiversity. The Panel assesses positively the efforts deployed by SIOFA in conducting various studies over the last few years to understand the distribution of VMEs using predictive modelling. Furthermore, SIOFA has established protocols to collect VME occurrences/interactions with fishing operations. There are issues in processing this data and recording of data by observers. Even though a SIOFA VME guide was prepared by the Secretariat for the PAEWG in 2021, it is unclear to us from available information whether the VME guide is in use by the observers.
61. It is the Panel's assessment that the set of BFIAAs adopted by SIOFA is consistent with the FAO Deep Sea Fisheries Technical Guidelines. All CCPs conducting bottom fisheries have developed a BFIA. The gap analysis of CCP BFIAAs conducted by the SC in 2019 revealed several inconsistencies and issues across all BFIAAs. Since then, some CCPs have revised their BFIAAs in compliance with the standard. However, according to available information, most of the BFIAAs have not addressed the issues raised by the SC, despite the latter considering them compliant with the standards. This state of affairs might be the consequence, in particular, from issues of capacity building in some CCPs.
62. SIOFA has adopted a protocol for the designation of protected areas, but the protocol is still agreed only as interim, due to disagreements among CCPs about its interpretation and application. The protected areas that have been designated so far are thus also adopted on an interim basis. Since MOP 5, there is not much work done to progress on these protected areas as fully-fledged protected areas. The purpose or usefulness of attributing an interim status to these measures is unclear to us, since it does not seem to lead to a review or any further action to consolidate or improve them.
63. In the Panel's view, SIOFA's work on the development of the fishing footprint has been remarkably slow, but has gained pace in the last few years. The Panel welcomes the SC work on

finalising the footprint and its recommendation for adoption by MoP 10 in 2023. We hope the footprint can be used as a basis for establishing a proper bottom fishing conservation measure.

Nr	Recommendation	Priority
4	The Panel recommends SIOFA CCPs assess the use of the VME Guide by observers and take action to ensure its use as required, and also implement awareness programmes targeting observers.	M
5	The Panel recommends SIOFA CCPs finalise the protocol on VME and protected area designation and speed up the process of progressing the agreed protected areas from their interim nature and identify any further areas in need for protection.	H/M
6	The Panel recommends SIOFA CCPs consider capacity building activities for developing States to undertake BFAs as per the SIOFA standards.	M

1.3. Data collection and sharing

64. CMM 02 on the collection, reporting, verification and exchange of data relating to fishing activities in the Agreement area (data standards) is among the first measures adopted by SIOFA in 2016. The measure has since been modified in 2017, 2018, 2019, 2021 and 2022. These modifications are in response to successive advice from the subsidiary bodies, both CC and SC. CCPs are mandated to report by 31st May of each year catch and effort data by gear type (demersal longline, handline, line trap, pelagic longline, and trawl) and catch summaries for all species/groups caught in the Agreement area for the previous year. The data to be reported includes calendar year, FAO statistical area, species groups, species codes and annual catch in total. Furthermore, CCPs are mandated to submit their national report 30 days prior to the SC scheduled meeting, including fishing and research activities conducted in the previous year according to the guidelines developed by the SC (paragraph 9). The SC so far has been held prior to the reporting deadline. CCPs are also mandated to report observer data for the previous calendar year by 31 May. A 100% observer coverage is prescribed for trawls, 20% for other bottom fishing gears in SIOFA fisheries under CMM 01. CCPs fishing for toothfish in DCR are mandated to report daily their longline start and end points of set longlines and monthly report of catch in weight and pieces by vessel, whereas those operating in WR are mandated to report daily their catches and their longline start and end points. CCPs conducted such fisheries are also required to tag and release toothfish species at a rate of at least 5 fish per tonne.
65. Given the very limited numbers of CCP flagged-vessels conducting targeted fisheries in the Area, data confidentiality, access and use of data are also taken as a matter of priority. SIOFA adopted CMM 03 on data confidentiality in 2016 and subsequently revised it in 2017 and 2018⁴³. This CMM defines various categories of “public domain data”. Among these, “public domain catch and effort data”, are defined in Article 2(b) as *catch-and-effort and length-frequency data grouped by 5° longitude by 5° latitude by month stratified by fishing method associated with catch and flag State, provided that the catch of no individual vessel can be identified within a time/area stratum. In cases when an individual vessel can be identified, the data will be aggregated to preclude such identification, and will then be “public domain catch and effort data”*. According to Article 2(c), this data cannot be made publicly available until a SIOFA bottom fishing impact assessment and a SIOFA bottom fishing footprint is completed. There are still today differences of opinion among CCPs about the interpretation of the “public domain catch and effort data”

⁴³ Amendments to this CMM were editorial and did not entail a change in the reference year of adoption.

scope, in particular regarding the level of aggregation required to make the data publicly available when a single vessel is present for a fishery in a time/area (5⁰ by 5⁰) stratum. Catch and effort data are provided to consultants for stock assessments with the consent of the CCPs concerned and consultants are under an obligation to remove all confidential data from their systems once the project has been completed.

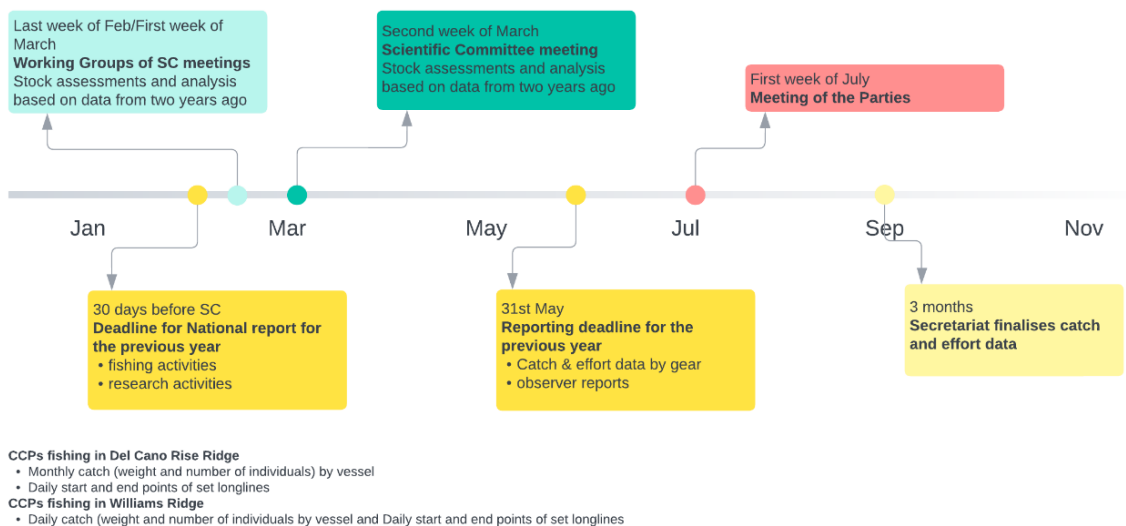


Figure 3: Data reporting and meeting schedule of CCPs in SIOFA

66. The process of clearing and entering data submitted by CCPs into the SIOFA database represents a significant workload for the Secretariat. The Panel has been made aware that this process usually takes 3 months, but with late submission and further delays in the finalisation of data by CCPs, this process may take even longer. For example, by end of January 2023, the Secretariat still considers 2021 data as preliminary. Furthermore, since the SC meets prior to the data reporting deadline, stock assessments and other advice to the MoP are based on data from two years prior. This proves to be a challenge for the SC to provide timely and adequate advice to the MoP (see for example SC 6, paragraph 30).
67. SIOFA has also undertaken two separate audits, one on access, dissemination and presentation of data and another on data cybersecurity. These audits highlighted several gaps in systems, procedures, data storage and handling protocols. In light of the recommendations made by the audit consultants, MoP 9 adopted in 2022 a standard operating procedure for data use and data requests (Annex L) and a data security and related work plan (paragraph 187). SIOFA has established very stringent protocols on data confidentiality stemming from the nature of the fisheries and in response to accidental instances of fine-scale fisheries data shared in the public domain by the Secretariat (see for example SC 5, paragraph 57). Furthermore, there have been instances of double counting and discrepancies in data provided to the consultants for stock assessments and analysis (see for example SERAWG 2, paragraph 27). It must be also noted that there is only one member of the Secretariat in charge of data management, IT management and website management who, in addition, acted as the SC focal point in the secretariat until 2022. Even though the confidentiality measures in SIOFA have to the extent possible protected the CCPs and their industry, it has slowed down the work of the SC, due to delays in providing data to consultants (SC 7, paragraph 131). Even though article 14 of the Agreement mandates CCPs to promote transparency, SIOFA does not publish data catalogues or catch and effort data even on aggregated form to the general public. The Secretariat presented a pilot data dissemination platform at SC 8 in 2023, which has been absent in the SIOFA so far. The SC also further agreed that when there is one vessel for a fishery, the system will display information based on a three-year moving average (paragraphs 114-116).

ASSESSMENT

68. SIOFA has indeed agreed on formats, specifications and timeframes for data submission, and the data so collected is duly shared by CCPs, even if questions remain about the completeness and accuracy of the fisheries data submitted by CCPs, which requires efforts by the Secretariat to liaise with national contact points on a regular and even frequent basis every year. On paper, it is the Panel's assessment that SIOFA's data collection standards and yearly reporting mechanisms are consistent with established practice in all other RFMOs, and that any gaps in the system is not related to the overall requirement, but rather to the ability of CCPs to produce complete and accurate data, and submit them timely to the Secretariat. We must note, however, that in some instances, CCPs still have discretion about the specifications applicable to certain data sets, and that different choices made by different CCPs as to those specifications sometimes pose challenges for their processing and use by the SC. These issues are also discussed in Section 2.7 of this Report concerning reporting requirements. We recall stakeholder input into this Review reveals that, in particular, some SIOFA CCPs have concerns with respect to the amount of data collected or instances of duplication of data reporting requirements⁴⁴ which might, to some extent, relate to such issues.
69. SIOFA's annual reporting of catch and effort data are set to be received by 31st May. We note that some CCPs report beyond this deadline. The SC meets usually late March, at a time when the data has not yet been submitted, except summary provided in national reports, the deadline for which is 30 days ahead of the SC. Thus, the SC's recommendation and advice to the MoP is based on 2-year-old data. This poses a risk for the timeliness and efficacy of measures the MoP might want to consider on an urgent basis, especially given that the MoP – as we discuss in Section 1.5, below, has often made action for a given stock contingent on the SC advising on a sharp increase in effort or catch trends for the relevant fishery. This 2-year lapse in the data made available to the SC could therefore prove to be a challenge in effectively monitoring and managing the fisheries, especially since instances of sharp increases, e.g., in toothfish catches in a single year have already been seen in the past.
70. The Panel understands the importance of confidentiality of data in particular positional data. However, we are at pains to understand the reasons behind the current practice against releasing catch data to the public (even without the effort information aggregated by time/area). The Panel understands with the completion of the SIOFA bottom fishing impact assessment and SIOFA bottom fishing footprint, hurdles to publicly release the information will be lifted. The Panel believes the new platform developed for the SIOFA website will improve the transparency and accountability of SIOFA fisheries.
71. Besides the improvements in dissemination just discussed, SIOFA needs, in our view, to modernise data reporting mechanisms to minimise the process of clearing and entering data submitted by CCPs into the SIOFA database. With limited staff, SIOFA needs to prioritise automated systems for data reporting to improve efficiency and productivity. SIOFA could use the experience of both IOTC and CCAMLR in data reporting modernisation. Specific Recommendations in this regard are issued in Section 2.7 of this Report.

⁴⁴ For example, the annual national report, the annual catch summary and the annual catch and effort data report contain the same information, at least in part.

Nr	Recommendation	Priority (H/M/L)
7	The Panel recommends either the deadlines for data submission under relevant CMMs or the schedule of the annual meeting of the Scientific Committee be revised to ensure the SC has the most recent data available ahead of its annual meeting.	H
--	Recommendation Nr 34 on the implementation of reporting requirements, specifically on the development of an IT-platform for the management of data and information submissions also apply to the issues assessed under this criterion.	--

1.4. Quality and provision of Scientific Advice

72. The Protected Area and Ecosystems Working Group (PAEWG) and the Stock and Ecological Risk Assessment Working Group (SERAWG), both subsidiaries of the SC, are at the core of the scientific processes in SIOFA. The PAEWG’s main task is to review the protected area proposals, provide advice on ecosystem assessment and develop research and management plans for protected areas⁴⁵. The SERAWG is also tasked with undertaking stock assessments and ecological risk assessments (and related processes)⁴⁶. Other workshops and meetings beyond PAEWG and SERAWG are on occasion hosted by the SC⁴⁷. The discussions and recommendation of these working groups and workshops are passed on to the SC for verification and approval before the MoP is provided with advice (Figure 4).

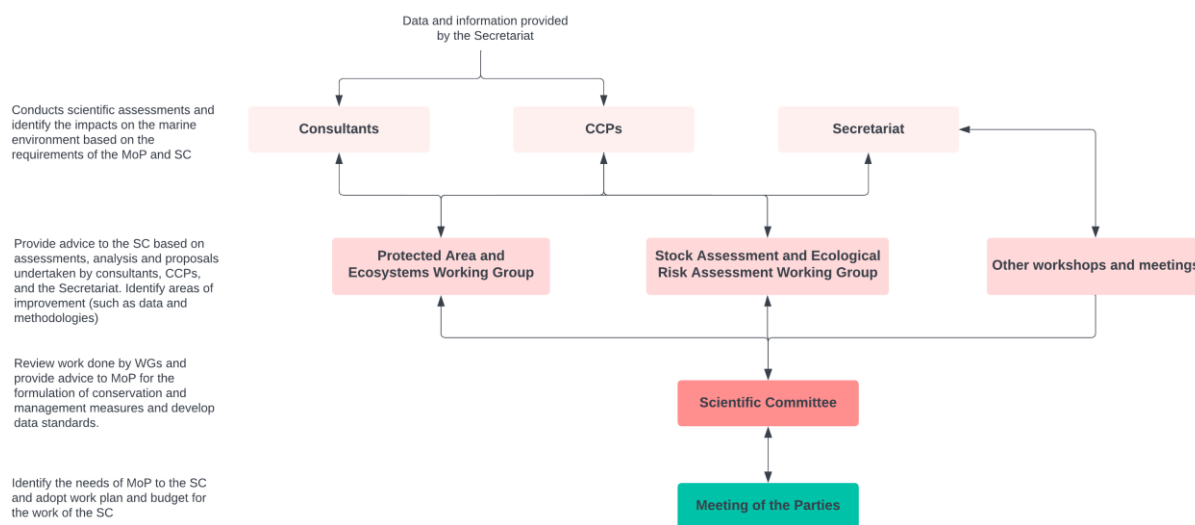


Figure 4: Scientific processes for the provision of advice in SIOFA in 2022.

73. The Scientific processes in SIOFA have improved in the last few years. However, the limited number of CCPs involved in the various SIOFA fisheries proves to be a challenge for securing a broader membership involvement in scientific work. For example, toothfish is fished by Australia, EU(Spain), France (OT), Japan and Korea; orange roughy by Australia, Cook Islands, Mauritius; alfonsino by Australia, Japan and Korea; scads by Thailand; shallow water snappers by

⁴⁵ <https://siofa.org/sites/default/files/documents/ToR%20PAEWG.pdf>,

⁴⁶ <https://siofa.org/sites/default/files/documents/ToR%20SERAWG.pdf>

⁴⁷ <https://siofa.org/meetings/other-meetings-and-workshops>

EU(France), Mauritius, Thailand and Comoros; deep-water snappers by Australia and EU (Spain) and oilfish by Chinese Taipei. Moreover, the lack of scientific capacity in the region with regard to deep-sea fisheries has also hindered a broader CCP engagement in SIOFA science.

Table 3: Chairs and Vice Chairs of SIOFA 2016 - 2022

Year	PAEWG		SERAWG		SC	
	Chair	Vice-Chair	Chair	Vice-Chair	Chair	Vice-Chair
2016					Dr. Ilona Stobutzki	Dr. Tsutomu Nishida
2017					Dr. Ilona Stobutzki	Dr. Tsutomu Nishida
2018					Dr. Ilona Stobutzki	Dr. Tsutomu Nishida
2019	Dr. Patrice Pruvost	VACANT	Dr. Tsutomu Nishida	Mr. Lee Georgeson	Dr. Ilona Stobutzki	Dr. Tsutomu Nishida
2020	Dr. Patrice Pruvost	VACANT	Dr. Tsutomu Nishida	Mr. Lee Georgeson	Dr. Ilona Stobutzki	Dr. Tsutomu Nishida
2021	Dr. Patrice Pruvost	VACANT	Dr. Tsutomu Nishida	Mr. Lee Georgeson	Mr. Alistair Dunn	Dr Sebastian R. Alfaro
2022	Dr. Patrice Pruvost	VACANT	Dr. Tsutomu Nishida	VACANT	Mr. Alistair Dunn	Dr. Sebastián R. Alfaro

74. Table 3 above illustrates SIOFA’s difficulty in appointing chairpersons for the various scientific meetings. In the 7 years since the inception of the SC, only 7 participants (including the independent Chairperson) chaired, or vice-chaired the meetings of the SC and its 2 working groups. The SC Chair and Vice-chairpersons were initially appointed for a term of 5 years, even though the Rules of Procedure allow a maximum of 4 years (2 2-year terms) before they need to be replaced. In 2021, MoP 8 decided to change approach and recruit an independent Chairperson due to lack of nominations by CCPs and the increasing workload of the SC⁴⁸.
75. Given the difficulties in filling the vacancies in the SC and WGs Chairpersons and with a view to make the SC more efficient, MoP 9 decided in 2022 to incorporate the discussions of the SERAWG and PAEWG into the SC on a trial basis (MoP 9, paragraphs 166 - 167). Due to a lack of clear mandates, the work of the working groups is often repeated in the SC without much value-added. In other RFMOs working groups subsidiary to the Scientific Committee, major findings or stock assessment are discussed at SC level while other detailed work is left to the WGs. The Panel believes that combining these 2 WGs carries the risk of further impacts on developing States with limited scientific resources as to their capacity to engage in the highly technical and complex work required by stock assessments and other scientific tasks. However, SC 8 concluded in 2023 this organisational approach had worked well, noting the contribution made by the creation in 2021 of the Science Officer position at the Secretariat. It recommended to the MoP to continue operating in this way from now on, supplemented by workshops, focused agenda items at the SC meeting itself and the establishment of two Vice-Chair positions (paragraphs 335.v and 338-341).
76. In early years, CCPs undertook most of the SC work through their national research organizations. However, the trend, particularly over the last few years, has been to hire independent consultants through voluntary funding from a very limited number of CCPs. SIOFA’s annual budget lines for scientific activities have remained at €30,000 in the last 6 years (excluding the remuneration of the contracted SC Chairperson) and has been decreased to €25,000 for 2023 and forecasted to remain at this level for 2024⁴⁹. This budgeted amount is clearly low for the needs for the SC work and the use of ad-hoc grants funding to supplement the budget is not sustainable and it has its challenges and risks. The needs of the funding agency and the SC’s

⁴⁸ See Section 5, below for details.

⁴⁹ *Ibid.*

objectives in some instances have not been aligned and this might be a continued risk going forward. Further, these projects and consultancies have in the past worked in silos delimited by each project's ToRs, and with relatively limited engagement by the Secretariat and the SC. The SC is currently in the process of improving the synergies between different consultancies by liaising with the consultants within an advisory group to the SC Chairperson to which the Vice-chairperson, voluntary SC members and the Secretariat participate. SC 7 requested MoP 9 in 2022 to determine the level of priority of each scientific project, consider longer timelines for the process of recruiting and employing consultants and include a clear confidentiality agreement in consultancy contracts. It also requested project ToRs be developed prior to the SC for consideration and approval (paragraph 171).

77. Since its first meeting in 2016, the SC has maintained a short-term work plan containing the tasks identified by the SC itself and requested by the MoP in successive meetings. These tasks are to be fulfilled by CCPs, PAEWG, SERAWG, the SC, the Secretariat and various consultants hired by SIOFA. The latest iteration of the work plan for 2022 – 2023 lists 51 tasks assigned and prioritised by the likelihood of success and the importance to SIOFA management outcomes or to the functioning of the SC.
78. The SC has in various occasions noted that the papers submitted to it arrive after the prescribed deadline and there are often discussions among its members as to how to classify the submitted papers (as meeting document, working paper or information paper) on the first day of the meeting (see, for example, SC 4, paragraphs 6 – 14). This delay may prevent the SC from making the most of the time available to it in order to hold effective discussions and produce robust advice to the MoP.

ASSESSMENT

79. With regard to the quality of the scientific advice provided by SIOFA's SC, it is our general assessment that the SC is making the most of the means at its disposal to provide CCPs with guidance toward decision-making. However, we refer to our assessment under Section 1.5.2, below, where we examine how discussions within the SC are sometimes marked by compromises as to how to respond to scientific uncertainty. We make recommendations in that section to improve SIOFA's performance in this respect. We draw attention to the fact that given the limited knowledge available to SIOFA – as discussed in previous Sections – regarding the actual status of the stocks under its purview, the issue of the advice and CCPs management action in response to the advice is essentially related to their implementation of the Precautionary Approach; hence our assessment focus under the relevant assessment criterion and sub-criteria in that Section.
80. Against this background, the Panel is of the view that the limited number of CCPs involved in the various SIOFA fisheries proves to be a challenge for securing a broader membership involvement in scientific work. This is evident from the chairmanship issues affecting both the working groups and even the Scientific Committee itself. The establishment of subcommittees for stock assessment may provide a platform for a broader involvement of experts from different CCPs and stakeholders, beyond those with a direct interest in the relevant fishery. Specifically in respect of our assessment of SIOFA's scientific structures and processes, we note the results of SC 8 on the organisation of its work, but still believe it necessary that further experience in the SC-WG combined approach be gained in future sessions before adopting it for the long-term. We still see a risks SC meetings could become far too burdensome while preventing adequately detailed discussions on two areas – those of competence of the two previous SC WGs – which are quite specific and distinct. Moreover, as noted earlier, the combination of the working groups might diminish the availability of a platform for the learning experience of developing State representatives. In light of the results of SC 8, however, the Panel will not issue a specific

recommendation on this issue at this time.

81. The limited number of CCPs involved in the various fisheries also proves to be a challenge when it comes to ensuring important scientific information can be collected from different sources, which is crucial for the purposes of data verification and cross-checking. This issue may be related to SIOFA's approach to use independent consultancy contracts for much of its Scientific groundwork. It is our assessment that this approach has been affected by these consultancies working in silos in the past, resulting in limited output. However, there is work underway to improve the communication and possibly harmonisation between consultancy projects this needs to be built on, in our view. The management of consultancy contracts and oversight of the work imposes a considerable workload on the Secretariat staff, as well as on the Chair and Vice Chairpersons of the SC. We believe SIOFA could either hire an independent consultancy firm, organization or academic institution to provide the necessary scientific information or maintain a list of experts approved by the SC and the MoP to conduct analysis for the SC in different fields. This would minimise the time required and ensure harmonization between different consultancies. We also refer to our assessment and recommendations in Section 5, below, regarding the funding aspects of this approach, which are a key element for CCPs to consider.
82. The SIOFA SC has so far operated on the basis of a short-term workplan containing the tasks identified by the SC and assigned to it by the MoP. The current list consists of 51 tasks assigned and prioritised based on the likelihood of success and importance of SIOFA management outcomes. We believe the SC could adopt a longer-term strategic plan identifying goals, activities and the budget required to conduct those activities. By adopting a strategic workplan, the SC could distribute the work load, obtain commitments from CCPs and secure the required funding for the activities. It would also prevent or at least minimise disruptive instances of short-term advice requests by CCPs, except in cases where significant changes in the fisheries characterisation observed in the field justify urgent precautionary action. The transparency recommendations made by SC 8 (data and paper transparency), will help to improve consistency and avoid duplication of work. Beyond the recommendations issued in the already cited later Sections of this Report, we believe giving the SC the opportunity of devising a longer-term strategic plan for its work would significantly result in SIOFA's performance improvements in this area.

Nr	Recommendation	Priority (H/M/L)
8	The Panel recommends SIOFA CCPs task the Scientific Committee to develop a long-term strategic plan with identified priorities for its work and options for the use of independent consultants, academic institutions, private/public organisations and/or CCP expertise resources as feasible, taking into account funding requirements.	M
--	Recommendations nr 7, 10 and 46 concerning, respectively, the scheduling of SC meetings, the development of a framework for Scientific Advice and the management of human and funding resources for its work apply also to the issues assessed under this criterion.	--

1.5. Adoption of conservation and management measures

1.5.1. Adoption of measures

83. SIOFA has currently 15 Conservation and Management Measures (CMMs) in force⁵⁰. Eight of these (CMMs 2016/04, 2022/06, 2022/07, 2020/08, 2022/09, 2019/10, 2020/11 and 2021/14) regulate matters pertaining to compliance and to fisheries monitoring, control and enforcement. They are discussed in section 2 below. CMMs 02 and 03 on data standards and confidentiality, respectively, are relevant both for the conservation and management assessment area and for the compliance and enforcement assessment area and are discussed in various Sections in this Report. In this Section, we will focus on the 5 standing measures concerning conservation and management of fishery resources and the protection of marine biodiversity, which take as a legal basis Article 6(d) of the Agreement. These measures are the following:
- 2020/01 – Interim management of bottom fishing;
 - 2016/05 – Pelagic Driftnets and Deepwater Gillnets;
 - 2022/12 – Sharks;
 - 2022/13 – Mitigation of Seabirds Bycatch;
 - 2021/15 – Management of Demersal Stocks.
84. When the Agreement was adopted in 2006, signatories committed to cooperate under interim arrangements while awaiting entry into force and SIOFA becoming operational. The interim arrangements focused on securing the collection of data needed to establish a base on which SIOFA could characterise the fisheries taking place in the high seas of the Southern Indian Ocean and work towards the assessment of the state of the resources placed under its purview. To this end, participants in the Intergovernmental Conference which developed the Agreement's text already adopted, at the 4th session in July 2004, a Resolution on data collection. The Resolution was appended to the final text of the Agreement and IOTC offered to be the recipient of data submitted by signatories. IOTC attended MoP 1 in 2013 as an observer and submitted information to CCPs regarding the implementation of the data collection Resolution adopted at the 4th SIOFA IGC (MoP 1 report, Annex H). IOTC had by then received 3 data submissions under the Resolution. Although MoP 1 mainly focused on decisions needed for the operational setup of the organisation, CCPs did agree on the need to speedily develop and adopt at least temporary conservation measures, including through intersessional work. The temporary measures would address: a) deep-sea gillnets and large-scale pelagic driftnets; b) protection of vulnerable marine ecosystems; and, c) constraints on the deep-sea trawl fishery (paragraphs 46-49). In addition, CCPs agreed to consider, during the intersessional period, proposals for measures to give effect to UNGA Resolutions 61/105 (2006), 64/72 (2009) and 66/68 (2011) prior to the following MoP (paragraphs 50-53). This included the possibility of formally adopting the fishing closures (Benthic Protected Areas, or BPAs) voluntarily implemented already at the time by the industry association SIODFA. The discussion continued at MoP 2 in 2015, but CCPs did not reach consensus on any measures except for an interim recommendation relating to the use of deepwater gillnets in the SIOFA Area (paragraph 24) and an agreement that each CCP would endeavour to limit the deep-sea trawl fishing effort to recent historical levels until MoP 3 in 2016 (paragraph 27).
85. The adoption of binding CMMs took therefore 10 years since the adoption of the Agreement and 3 years since its entry into force. This was made possible by the outcomes of the extraordinary MoP held in October 2015, when among other mainly operational decisions, CCPs adopted the SIOFA RoP and the ToRs of the Scientific and Compliance Committees, which set the legal and

⁵⁰ Publicly accessible at <https://siofa.org/management/CMM>

scientific framework for the consideration of proposals for binding measures at MoP 3 in 2016.

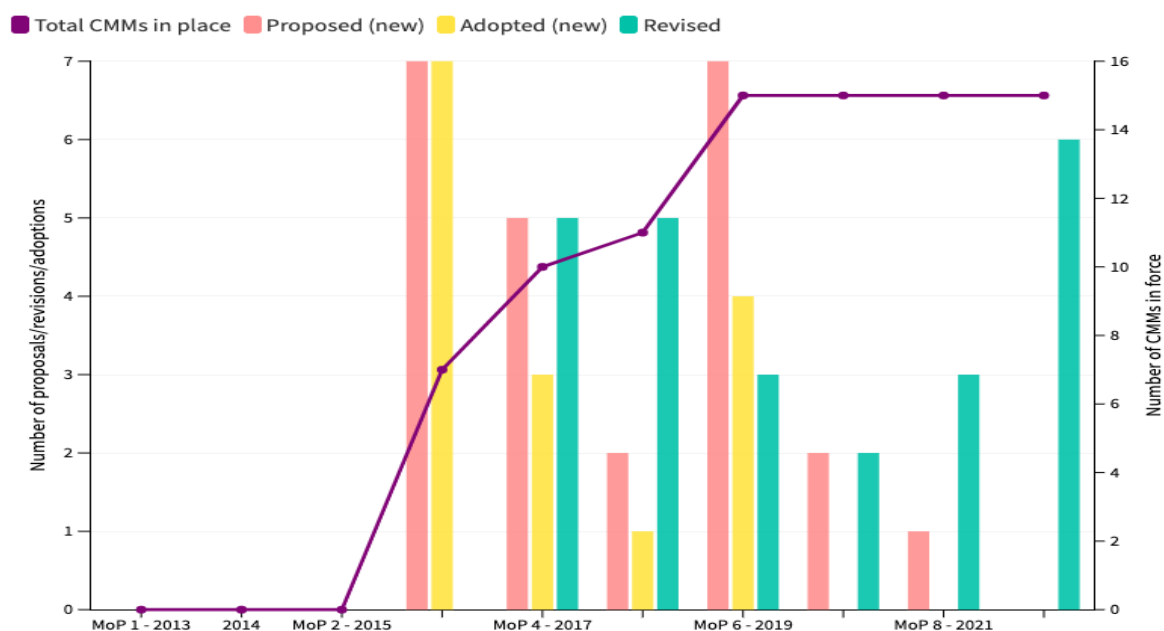


Figure 5: Evolution of SIOFA's rate of adoption and revision of CMMs since its inception (includes conservation and management as well compliance and enforcement measures).

86. Among the first set of CMMs adopted in 2016, CMM 01 has set the core of the discipline for the conduct of fishing operations in SIOFA based on an approach largely relying on national rules which CCPs agree to share. With the exception of CMM 05 on gillnets and driftnets, the rest of the first set of adopted SIOFA CMMs focused on fisheries control and this focus would continue until 2019 with the adoption of a set of 3 further CMMs of relevance for this assessment area. They are CMM 12 and CMM 13 with measures to minimise bycatch of, respectively, sharks and seabirds, and CMM 15 on measures to manage demersal stocks. These various measures have been revised regularly, especially CMM 01 (almost every year). The only measure of relevance for this Section that remains unrevised since first adopted in 2016 is CMMs 05.
87. Since 2016, various proposals on the conservation and management of resources have been tabled but failed to reach consensus. CCPs have tabled unsuccessful proposals on the regulation of research activities (first discussed at MoP 4 in 2017) and those pertaining to the regulation of new and exploratory fisheries in the Area (also first discussed at MoP 6 in 2019). Discussions and technical work among CCPs have taken place via intersessional consultations and informal CCP working groups with the aim of progressing the measures. However, they have been inconclusive and no new proposal was presented to MoP 9 in 2022. An unsuccessful proposal deserving particular attention was a set of ideas, rather than a drafted set of measures, presented to MoP 6 in 2019 which purported to initiate discussions towards the conversion of the interim bottom fishing arrangements in CMM 01 into general rules of a permanent nature. There is little evidence of progress made regarding this initiative in ulterior MoP reports⁵¹.
88. To close this overview of the regulatory activity history and state of play, it is worth noting that stakeholders who provided input to the Panel almost unanimously agreed on the adoption of the standing set of CMMs in force as being a key, if not the greatest, achievement of SIOFA so far.

⁵¹ See Section 1.5.6, below.

ASSESSMENT

89. SIOFA's regulatory activity history reflects well the needs of a small and young organisation, where CCPs have focused on developing a control and enforcement framework first, while building the basis for stock management progressively through data collection. We note how stakeholders see the array of measures adopted since SIOFA's inception as a great achievement, in the understanding that such development would have taken a longer and more laborious process had the organisation been larger and the fisheries resources concerned more abundant, with more fleets competing on the field for them. We believe, however, that SIOFA CCPs should not fall into complacency on account precisely of such factors. We also note that, in fact, the core of the rules which establish a true discipline for the conduct of fishing operations for key species lies still under national laws rather than regionally accepted management measures and principles.
90. The fact that fleets from various CCP flags do not often compete for resources in the same areas or timeframes, especially regarding bottom fisheries, may underlie our perception that the need for a clear and transparent level playing field is not deeply felt among the membership. If correct, this perception may have consequences such as SIOFA's lack of preparedness were the fleets to change their pattern of utilisation of resources. But also the fact that this state of affairs effectively discourages new States from joining SIOFA's effort to conserve all marine resources, not just fish stocks, whereas RFMOs like SIOFA are being increasingly called to adopt a broader understanding of their role as stewards of the marine global commons, especially in light of the imminent adoption of the new UNCLOS Agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction. This new Agreement, negotiations on which have just been completed at the time of writing, will require further efforts from all RFMOs to join actors and bodies from all sectors in a concerted action to protect marine biodiversity. SIOFA must prepare itself to take up these responsibilities and deliver committed action to preserve the rich and valuable biodiversity of the Indian Ocean.
91. In order for SIOFA's adoption of measures to raise to higher standards of performance, we believe CCPs should seek to establish a vision of legal quality and robustness for their regulatory framework, seeing it as a corpus marked by completeness, clarity, internal consistency and structural soundness, rather than a series of individual measures adopted in sequence on a piecemeal basis. We believe CMMs should be clearly structured by content, with a clear separation between the organisation's programmatic, operational provisions (such as the regulation of the activity of the Scientific Committee, for example), and rules that fishers must abide by. In light of existing RFMO best practices, this can be done by using different instruments, programmatic on one side and regulatory proper on the other, so that actual management rules are clearer and more stable, for the benefit of those who must implement them in the field. CCPs should identify the gaps in the system and address them, notably by ensuring the coverage of all fisheries, in particular all fisheries not conducted with bottom gears, which are expected to increase their economic relevance in the Area, but are now subject to minimal regulation. Also, SIOFA's measures must strive to become ever more compatible with those adopted by neighbouring RFMOs, especially those for toothfish, although this issue will be further discussed later on in this Report.

Nr	Recommendation	Priority (H/M/L)
9	The Panel recommends CCPs to launch an exercise of consolidation of the various CMMs into a corpus of SIOFA rules and regulations, with the aim of codifying the applicable rules to make them clearer, easier to interpret and easier to control in terms of compliance. This exercise should identify existing gaps and possible contradictions, issues of interpretation in need of resolving, and a future structure of the corpus that allows the different actors on whom the various obligations fall (from SIOFA's own bodies, to CCP authorities, to fishers) to have a clear and user-friendly access to their applicable rules and discipline.	M

1.5.2. Implementation of the Precautionary Approach

92. The application of the Precautionary Approach (PA), which is indeed mandatory under Article 4(c) of the Agreement, is facilitated when an agreed overarching framework for implementation is in place which guides decision-making by managers. Such framework must first build on another, namely a framework for the provision of scientific advice on a precautionary basis. SIOFA has not developed them, whether at advisory or at managerial levels. This Review requires therefore looking at this issue at least at two different levels. Firstly, we assess whether SIOFA CCPs have a good record of following scientific advice, taking into account that most if not quite all advice provided to the MoP by the SC is affected by data availability issues but also by the biological complexity characterising some of the resources SIOFA needs to manage – notably alfoncino – which would render their assessment intrinsically challenging even in a data-rich context. Secondly, the Panel believes that assessing the implementation of the PA also requires noting SIOFA's efforts to put in place instruments and tools that essentially seek to minimise the risks of adverse impacts on the conservation of target stocks, non-target species and the marine environment, particularly VMEs, from fishing activities.
93. With regard to the first level of analysis, the Panel notes the abundance of recommendations issued to CCPs by the SC each year. Most of these are accepted, and this must be clearly underlined. Notably, CCPs are receptive to recommendations from the SC relating to the latter's data and organisational requirements. However, when considering the implementation of the PA, we can highlight a number of examples which suggest CCPs are not always capable to reach agreement, or find themselves in disagreement about the best way to give effect to the SC advice, especially if the latter is not precise enough on recommended action.
94. SIOFA's focus on the management of toothfish, orange roughy and alfoncino, the three species to which CMM 15 on the management of demersal stocks applies, suggests specific attention must be paid to how CCPs have responded to SC advice on the conservation and management of what are considered SIOFA key stocks.
95. Starting with **toothfish**, this is the resource under SIOFA's purview whose harvesting is the most regulated, including Total Allowable Catch limits (TACs) for each of the 2 management units (MUs) established since 2019 through CMM 15 (Del Cano Rise – DCR; William's Ridge – WR). In addition to requirements for the timing and scope of the provision of advice by the SC, CMM 15 covers cooperation with CCAMLR, fishery seasonality, depth limits (no fishing at depths shallower than 500m), by-catch limits of 0.5 t per season (only for the DCR MU), VMS reporting requirements (to flag State), observer coverage (100% trawls, 20% longliners), tagging

requirements, specific catch reporting requirements, limits to vessel presence (1 per grid cell), rules for closing grids when bycatch limits are reached or the MU as a whole when the TAC is nearing exhaustion and other provisions. The TACs are not allocated among CCPs. Although not expressly indicated in the CMM, all these various rules seem to apply to bottom longline fisheries. According to the Overview of SIOFA Fisheries 2022, only longline and trap fisheries are conducted in the Area for toothfish (specifically Patagonian toothfish). However, the Panel is unable to assess how the various generic requirements for fishing operations would apply to trap fisheries since the CMM is not clear in terms of gear scope.

96. It is worth recalling MoP deliberations at the time CMM 15 was adopted in 2019. SC 4 advice, based on the results of the work carried out by its subsidiary SERAWG, noted in 2019 large catches of toothfish in the WR MU in 2018 and 2019, whereas there had been no fishing in the area since the early 2000's (paragraph 140). The Ridge's toothfish catch was by then acknowledged as belonging to the same population assessed and regulated by CCAMLR south of the boundary between both organisations. The surge in catches led the SC to identify 3 clear risks for the conservation of the resource, namely the undermining of CCAMLR conservation efforts for the specific population, the localised depletion of the part of such population occurring within the SIOFA Area and *the potential for further unrestricted toothfish catches to be taken on William's Ridge, without any management measure on catch limits* (paragraph 141). On this basis, the SC recommended that the MoP *urgently considers adopting temporary measures to regulate toothfish fishing on William's Ridge at levels commensurate with fishing activities reported in 2016, without however quantifying the recommendation*⁵² (paragraph 143). The SC described a similar evolution in the toothfish fishery taking place in the other MU, i.e., the SIOFA part of the DCR, and issued the same recommendation for this MU as for the WR MU, also without providing guidance on an appropriate catch level (paragraph 147). The *overview of SIOFA fisheries 2018*, which was the edition presented to the SC at the time, reported in figure 4 an almost nil level of toothfish catches for the entire SIOFA area in 2016⁵³. Whereas some CCPs pleaded in favour of a 0 TAC for the WR MU, consensus was eventually reached on a compromise for a TAC of 140 t for WR and of 50 t for the DCR MU. As a justification for this decision, it was highlighted that a 0 TAC entailing cessation of targeted fisheries would prevent a much-needed continuation of data collection for these resources (MoP 6 report, paragraphs 93-99). The two TACs still apply today, as the SC's advice since 2019 has been to maintain the management arrangements in place unchanged⁵⁴.
97. In 2021, SC 6 noted 2 other areas of apparent toothfish fishing outside the DCR and WR MU boundaries, in close proximity to the CCAMLR Convention Area (paragraph 24), none of which were covered by the catch limits adopted under CMM 15 the previous year or by other MU-specific measures, for that matter (for example, specific catch reporting requirements). It *recommended* that MoP 8 consider measures to effectively manage toothfish in these two areas and other similar areas where toothfish are caught in the Area. MoP 8 merely noted the SC *deliberations* (paragraph 81). In 2023, SC 8 *noted that over the last two years, the majority of*

⁵² It is conceivable that the SC was unable to provide a precise TAC recommendation corresponding to the 2016 catches in the specific management unit if such a figure might have been classed as confidential under the provisions of CMM 02 because only one vessel was active on the fishery. The same might be possible with regard to a TAC recommendation for the Del Cano Rise MU. According to the Overview of SIOFA Fisheries 2022 (Table 1 in section 3), in 2016 only 2 longliners plus one multi-purpose vessel were active in SIOFA, each flagged to a different CCP. It has not been possible to ascertain whether such vessels were or not simultaneously operating in any of the 2 toothfish MUs at the time.

⁵³ <https://siofa.org/sites/default/files/documents/meetings/SC-04-28%20Draft%20Overview%20of%20SIOFA%20Fisheries%202018%20rev.1.pdf>

⁵⁴ CMM 15 paragraphs 30 and 50 stipulate that the TACs are to be reviewed each year, *until a collaborative approach involving SIOFA and CCAMLR is established*.

toothfish has been taken in an area not subject to catch limits outside the Del Cano Rise and William's Ridge management areas. It agreed to work on the spatial definition of a new management area to encompass the catch made outside the two defined management areas. SC 8 recommended that the MoP consider management regulations for the areas outside Del Cano Rise and Williams Ridge as the bulk of the catch is currently coming from an area that is outside these areas and that is not subject to catch limits (paragraphs 141,142 and 154). In relation to the assessment of these stocks, and as noted in Section 1.1, above, SC 8 has discussed and recommended various actions to the MoP, relating in particular to data collection and research. At this time, however, the SC has not identified a possible target in time for the conduct of the stock assessment, and references to CCAMLR in this context are limited. As we have already noted, it is our understanding that the tendency in SIOFA seems to be to deal with toothfish stocks on its own. The Panel is at pains to understand this tendency, since the stocks concerned are recognised as straddling both Areas and they are also already assessed by CCAMLR. Even though cooperation with CCAMLR does take place and information about the relevant straddling populations as well as about tools and practices for stock assessment is regularly exchanged, we note SIOFA has not explored options for co-management with CCAMLR so far.

98. With regard to **orange roughy**, CMM 15 fixes the fishing season as coincident with the calendar year and mandates full stock assessments to be conducted every three to five years (paragraph 5). It also requires the SC to *provide a summary of future data needs to improve assessment accuracy, as well as provide a summary to MoP-7⁵⁵ on progress against the ORY workplan.* (CMM 15, paragraphs 4 to 6). Apart from the effort limits stipulated by the same CMM 01 for all bottom fishing in the Area, and the various rules that apply to all fishing activities in terms of data reporting, monitoring and control, there are no specific management measures applicable to the harvesting of this resource in SIOFA.
99. A first attempt at assessing the orange roughy stock started in 2017 at SC 2. However, the SC concluded that it was necessary to progress the assessment work intersessionally. The following year, SC 3 considered the assessment work carried out by the working group established to that end, SAWG⁵⁶, and reported to MoP 5 on the results of the three different assessment approaches tested by the WG. The discussion held by SC 3 on this issue is of interest to the Panel. There are numerous passages in the SC report highlighting the uncertainties affecting the assessments carried out⁵⁷. This notwithstanding, the SC concluded (paragraph 233): *The three assessment approaches are considered suitable for providing advice on the current stock depletion for the seven sub-regions assessed.* The advice to MoP in paragraph 234 of the Report focuses on the status of the spawning stock's biomass relative to its virgin biomass (B_0), and notes as a starting point: *All three assessment approaches indicated that the (spawning stock biomass in 2017) SS_{17} for the 7 sub-regions assessed was likely to be above 50% SSB_0 .* Beyond these results, the SC did not provide any further advice to the MoP in terms of recommending any particular action⁵⁸ in respect of the assessed stocks. We understand from the discussion that followed the

⁵⁵ MoP 7 took place in 2020.

⁵⁶ SAWG was later merged with ERAWG to become SERAWG.

⁵⁷ See for example paragraph 222: *The Secretariat does not hold all orange roughy data to the specifications of CMM 217/02 for the early part of the catch history. This does not allow the SC to be assured by the Secretariat that the catch information included in the assessment is verified.* 224: *The assessment was very time constrained (~1 month),* Paragraph 230: *There is uncertainty in the biological parameters that underpin all the assessments performed;* paragraph 231: *(The SC) Noted uncertainty in stock structure delineation.*

⁵⁸ Although the SC did mention that the stock in the Walter's Shoal Ridge was unlikely to see depletion to levels below 60% SSB_0 in the next 5 years if future catches in these years do not exceed those reported in 2017. Among all the subregions/MUs assessed, this is the only one for which the SC provided projections of stock conservation against a possible management scenario, namely constraining catch levels. SC 3 paragraph 234, 3rd bullet.

presentation of the advice to CCPs (MoP 5 report paragraphs 47-55) that the SC felt unable to issue such recommendations for lack of a framework for advice based on reference points agreed by the MoP. Indeed, the SC stated it required further direction from the MoP in this respect, *as it is not possible to develop advice on status or specific catch limits without reference points* (SC 3 para 234, second-last bullet). MoP 5 considered this advice, but went further in noting that *all assessed stocks, for which MSY estimates were available, were estimated to be well above the estimated BMSY*. The Panel notes that this information was not indicated in the SC advice, but rather in the original stock assessment papers produced by SAWG (MoP 5, paragraph 49). The Panel finds this revealing, as it must have been this information that led MoP to note (*ibid.*): *the SIOFA orange roughy stocks had never been overfished, were in a very healthy state, and currently being fished sustainably*. MoP 5, however, did provide some guidance to the SC on future work by requesting it to identify candidates for Limit Reference Points and Target Reference Points, and to provide advice on the status of stocks in relation to MSY until stock-specific reference points are adopted by the Meeting of the Parties (paragraphs 51-52). The request, incidentally, relates not just to orange roughy but also to alfonsino and toothfish.

100. Technical work on orange roughy assessments has indeed continued, in the understanding that the SC would review the data each year and would issue relevant advice to trigger a new assessment, ahead of the 3–5-year renewal period set in CMM 15, if catch or effort change by 20% or more in any year. The SC and SERAWG continued work on assessment methods and requirements at its 4th, 5th and 6th sessions. In 2022, SERAWG 3 presented an update of the 2017 assessment⁵⁹. Having considered the WG’s conclusions, SC 7 reiterated its 2018 advice for the Walter’s Shoal Ridge region (paragraph 88) and only noted that that the MoP could consider, in the interim, *maintaining fishing levels consistent with the recent average for the Long Eastern Ridge*⁶⁰, until such time as a reliable stock estimate could be obtained for this region (Para 89). In response to this advice, MoP 9 (paragraphs 133-139) agreed to hold the next orange roughy stock assessment in 3 years (2025), deferring until then a decision on possible conservation measures for the stock in the Long Eastern ridge, despite the concerns of at least one CCP that precautionary limitations would be in order. Other CCPs argued that given the fact that only 2 vessels operate in the Long Eastern Ridge, measures to constrain fishing levels were not urgently needed. However, the catches of orange roughy in 2020 are more than double the MSY estimate in Long Eastern Ridge⁶¹. In 2023, SC 8 reviewed the work planned in order to prepare for the 2025 stock assessment, but noted the genetic analysis needed for a stock structure analysis of this species is unlikely to have been completed in time (paragraph 125).
101. The level of detail in the above summary of SC and MoP discussions is relevant, since such discussions can be deemed to underlie the absence of a perceived need by CCPs to take precautionary action to conserve the orange roughy stocks, which seems to persist to date.
102. With regard to **alfonsino**, the third of the key SIOFA target stocks represents a special case compared to the other two on account of intrinsic complexities arising from biological and other factors to understand the stock structure and dynamics of this resource. However, alfonsino catches rank as the highest volume taken in the Area, having surpassed oilfish in 2021, and are significantly higher than catches of the other 2 key species⁶². Paragraphs 51 to 53 of CMM 15 are said to constitute a management plan for this species. However, these rules follow an identical

⁵⁹ Project SER 2021-04, see <https://siofa.org/system/files/restricted-meeting-docs/SC-07-35-ORY-stock-assessment-2021-v4-reduced.pdf>

⁶⁰ This region is not identified as a “Management Unit for the purposes of stock assessment” in the Overview of SIOFA fisheries 2022, map in section 6.2.4.

⁶¹ See Section 1.1, above.

⁶² See table 4 in Section 1.5.5, below.

approach to those summarised earlier for orange roughy, in that they merely fix the fishing season, also coincident with the calendar year, and direct the stock assessment work by the SC, including requesting an assessment be carried out in 2022 and advice be also provided at that *time on a regular assessment schedule for future years*. They finally instruct the SC to provide regular advice on data collection *in order to reduce future assessment uncertainty*. There are no MUs identified for this species and their status is reviewed by the SC only with reference to East and West regions of the Area⁶³.

103. Against this background, the work carried out by SIOFA on alfonsino has focused on finding meaningful ways to overcome the technical challenges involved in assessing its status. Progress was made through a consultancy project which presented its report to SC 5 in 2020. The consultant's assessment method yielded rather optimistic results. However, the SC noted (paragraph 116) that although the precision of the assessment results appeared high, this was a consequence of necessary model simplicity given the limited data, and in reality, the precision is low. This notwithstanding, the SC agreed (paragraph 117) that the stocks spawning biomass in 2018 (SSB₁₈) in both East and West was higher than MSY and higher than 60% of unfished SSB, and that fishing mortality (F) was less than F levels consistent with MSY. However, it also agreed that projections of SSB were contingent on catches maintained constant at 2018 levels, these being optimistic for the West region, less so for the East region (paragraph 118). SC concluded by recommending to the MoP (paragraph 119) that in light of the uncertainties around the stock assessment, it should take a *cautious approach* when applying the results. MoP 7 (paragraph 52.i) noted this advice and requested the SC to continue working to improve the assessment and watch for catch effort changes which, if significant, would trigger reassessing *and any additional measures required*. It also requested SC's *advice on data collection requirements to strengthen future alfonsino stock assessments at its ordinary meeting in 2021*.
104. As requested by the MoP, SC 6 issued this advice in 2021. Apart from suggesting a need for additional data such as otoliths collected by observers, the SC noted a need for standardising data collection protocols between fleets and for CCPs to submit historical data *according to the specifications of CMM 2019/02 (Data Standards)* (paragraph 105). There was no discussion at MoP on this advice save for one CCP expressing the view that *the work of the Scientific Committee should rely on peer-reviewed scientific articles*.
105. Finally, despite the requirement set out in paragraph 52 of CMM 15, SC 7 was unable to assess the status of alfonsino in 2022. This was due to the fact (paragraph 113) that *no papers on alfonsino were submitted to the SERAWG and the SERAWG therefore did not have any advice to provide*. However, the SC did request the MoP to note (paragraph 114) a 42% increase in alfonsino catches since 2018, the last year included in the assessment carried out in 2020, representing *an increase from a historical low to an average historical level*, even if effort had declined during the same period⁶⁴. MoP 9 endorsed this advice. Discussion among CCPs showed concerns by some of them about the observed increase in catches, but no agreement was reached on the need to take precautionary measures. The MoP requested the SC to conduct a new assessment for alfonsino at its 8th session in 2023. However, SC 8's report is unclear in this respect. The SC notes under the Section Stock Assessment for alfonsino that the next assessment for this species is scheduled for 2026, but offers no advice on the stock status other than the contents of the previous section on *Descriptive Characterisation*, where paragraph 130 states: *The SC noted that analysis of catch and standardised CPUE indices for alfonsino indicate that, provided CPUE is reflective of trends in abundance (figure 1), the stock is fluctuating without trend*

⁶³ See also Section 1.1, above.

⁶⁴ Reference was made in this regard to SC-07-20 rev 2, Fig. 4.2.1. This is the draft of the Overview of SIOFA fisheries 2021, which was circulated to the MoP as a restricted document.

in recent years. No recommendations on possible measures for the management of this resource are issued by the SC other than data-related, assessment scheduling and correction of technical errors in CMM 15 (paragraphs 199-203). It is the Panel's understanding that the alfonsino stock is intrinsically complex to assess, as we have already noted earlier in this Report, and that the SC was not yet ready to provide the assessment requested by the MoP in 2022. SC 8 identified several actions in its workplan with a view to attempt an assessment in 2026 for this resource (paragraph 139 and Annex F).

106. The Panel highlights how the history of SIOFA's dealings with its 3 key stocks exemplifies quite well the challenges faced by this RFMO in implementing precautionary measures when compromises on moving forward need to be found at the level of the SC itself for the provision of advice. With regard to toothfish, in addition, these events relate to stocks shared with a neighbouring organisation whose work on toothfish was already well advanced and rather robust at the time SIOFA became operational.
107. Beyond the consideration of the three key stocks, it is worth noting that, as already mentioned, oilfish fisheries yield the second highest volume of catches by weight. However, the level of regulation of this fishery is minimal, being subject to data reporting and control measures only. We discuss this matter further in Section 1.5.5, below. Oilfish stocks are not assessed and are being exploited without SIOFA having any means to determine whether the activities conducted on this significant resource are or not sustainable. We note, however, that first steps to carry out a stock assessment for this resource have been discussed by SC 8 in 2023. SC 8 paragraph 160 states: *The SC agreed to encourage the collection of length frequency data and develop standardised CPUE indices for oilfish and escolar from target fisheries towards conducting a stock assessment for these species in the future*. Oilfish may as well, subject to MoP agreement, become a candidate species for the development of harvesting strategies, as SC 8 asked the MoP to task it with identifying such candidate species⁶⁵.
108. The SC has also provided advice regarding **spatial measures for the protection of VMEs**⁶⁶ from a very early stage since SIOFA's inception. At the time the Agreement was open for signature in 2006, significant work had been carried out in the Southern Indian Ocean to map the location of VMEs⁶⁷, on which basis the industry members of SIODFA identified a number of Benthic Protected Areas (BPAs) where they would voluntarily refrain from deploying bottom gears, a discipline that continues today. The background to these industry-led measures was presented to and discussed by SC 1 in 2016. The SC advised the MoP to adopt the SIODFA areas, even though a reservation was noted at the SC itself from one CCP representative in light of fishing vessels from that CCP being active in one of the proposed BPAs (paragraph 67). The report of MoP 4 reflects no discussion on the SC recommendation. However, when adopting CMM 01 at that session, CCPs included in paragraph 5 a requirement for the SC to develop *maps of where VMEs are known to occur, or likely to occur*, in the Area. Work on SIOFA spatial measures has since then moved towards building the scientific basis for this mapping and the development of a standard protocol for future protected area designation. Notwithstanding, at MoP 5 in 2018, a proposal was tabled to adopt a number of closed areas, based on SC 3 recommendations (in SC 3 report, paragraphs 155 to 187). CCPs were unable to reach consensus on all the proposed closures and compromised on temporary measures regarding 5 areas where bottom fishing, excluding line

⁶⁵ See also Section 1.1, above.

⁶⁶ See also Section 1.2, above.

⁶⁷ Seabed habitat mapping carried out in the SIOFA area in 1997 and 2001 using sidescan sonar technology from the University of Hawaii Mapping Institute. The data was used in the delineation of potential Benthic Protected Areas (BPAs) in the SIOFA area by marine scientists. The BPA program of SIODFA was organised in association with the IUCN and the Cook Islands. Published as FAO Technical Report 1020 ([SC-01-INFO 18](#)).

and trap methods, would not be allowed (any other gear use in such areas being subject to 100% observer coverage). The area closures were – and remain – listed in Annex 3 of CMM 01 as temporary measures, up for review once the MoP adopts a revised SIOFA protocol for protected area designation (MoP 5 Report paragraphs 91).

109. Inaction despite recommendations issued by the SC also affects SIOFA’s specific management – or rather the absence of it – of the bottom fisheries taking place in the Saya de Malha Bank, as a result of conflicting claims over the rights derived from UNCLOS provisions on the Continental Shelf for two of SIOFA’s CCPs vs the rights of States in the High Seas. In this case, obstacles to the adoption of at least precautionary measures are of a completely different nature, as they do not relate to the availability of sufficient scientific information on the basis of which to act (were it to be indeed available, which is unclear). However, this is an area where significant activities and catches are being registered and which remains to this date, subject to no regional conservation measures outside the bottom fishing interim arrangements in CCM 01 and the common framework for control of fishing in the Area. Given the dissenting views among CCPs about the status of the fisheries on the Bank, even the application of the latter is disputed, making it in practice an almost nil level of regulation of the fisheries under SIOFA regional rules.
110. In researching the above examples, we note the reporting of MoP discussions reflects how certain CCPs raise the need to implement the PA in defence of the proposed measures, while those holding reservations contest the clarity of the scientific advice or signal their perception of low risk levels resulting from the fishing activities such measures would seek to constrain.
111. As to our **second level of analysis**, SIOFA is deploying significant efforts to develop a number of **tools** in support of conservation and management whose implementation should help operationalise the PA. Among these, 2 deserve, in our view, specific mention in this regard: impact assessments and harvest strategies.
112. With regard to **impact assessments**, the introduction the concept as a means to manage risks of adverse impacts on fisheries resources and the marine environment is an early element of the SIOFA regulatory framework, inspired by the recommendations issued by the UNGA and the FAO Voluntary Guidelines for Deep Sea Fishing. We have already discussed in Section 1.2, above, how SIOFA has chosen to operationalise the concept through Bottom Fishing Impact Assessments (BFIA), entailing an obligation for CCPs whose fleets engage in bottom fisheries in the Area to submit BFIA in accordance with the SIOFA standards (BFIA), as well as by means of an overall SIOFA BFIA. Since 2016, SIOFA has been working on implementing these tools while, at the same time, developing two complementary instruments, namely the bottom fishing footprint and a mapping of where VMEs are known or likely to occur, as mandated by CMM 01. Development on all three fronts has been laborious. The fact that the SC considers that all current CCP BFIA comply with the SIOFA BFIA Standards implies, in principle, that the relevant CCPs are deemed to have adequately assessed and, where appropriate mitigated, their assessed risks in order to ensure precautionary management of their fleet’s activities. However, as the name makes clear, this only applies to bottom fishing activities and no framework is being developed to extend this tool to pelagic fisheries in SIOFA at this time.
113. With regard to the SIOFA BFIA, the work is still in process. This work relies on CCP BFIA, but also on progress on other SIOFA processes, notably the ones already cited of the SIOFA footprint and the mapping of VMEs in the Area. Whereas the former is close to completion, with expected adoption by MoP 10 in 2023, a report on bioregionalization within the Area has been produced⁶⁸. The SIOFA BFIA has been entrusted to a consultancy funded by CCP grants since late 2020 and a

⁶⁸ See Section 1.2, above.

report – still classified as a restricted SC document at the time of writing – has been produced by the consultant. The report was considered by SC 7 (paragraph 199) and MoP 9 (paragraph 96), in 2022, with the latter noting the recommendations issued by the consultant and endorsed by the SC. The Panel understands, however, that the SIOFA cumulative BFIA can be considered completed and SC 8 has recommended (paragraph 106) that the BFIA abstract, at least, be made publicly available.

114. With regard to **harvesting strategies**, in the absence of an overall framework for the implementation of the PA, efforts to develop such strategies in SIOFA can certainly provide a basis for adopting fishery input and outputs controls in a consistent and more precautionary way. They could guide the production of case-by-case advice by the SC and, to some extent, also guide CCPs or at least mitigate the risk of opportunistic, short-term decision making.
115. Harvesting strategies were discussed by the SC for the first time at SC 6 in 2021. 3 different options were identified (paragraph 121):
 - i. freezing catches at present levels until data improves (save if a marked downwards trend is observed in the resource);
 - ii. implementing a Fishing mortality status quo (F_{sq}), with variable catches, by reference to some measure or index of abundance, and
 - iii. some multiple of a proxy value of F_{msy} , in turn is based on a proxy for B_{msy} informed by the latest assessment.
116. These options were discussed only in relation to the three key species of orange roughy, toothfish and alfonso. With regard to most other SIOFA species the SC noted their data limited status meant that *assessments and consequently reference points and harvest strategies are not yet possible to develop*, while also noting that *approach i. could be the most viable at this time, but that this would need to be augmented by one or more precautionary provisions to check whether catches were sustainable and take corrective action in the event that there were persuasive indications to the contrary* (paragraphs 122-123). Ultimately, SC 6 recommended the MoP to discuss the options and consider proposed interim reference points for orange roughy and alfonso, whereas for toothfish, the reference points adopted by CCAMLR should be considered. The SC also recommended the MoP considered developing a set of objectives, along with reference points, such as the stability of catch and effort levels as well as avoiding undue risk to the stock, amongst others to be determined by the SC and the MoP (paragraphs 125-126). In response, CCPs agreed at MoP 8 to request the SC for a roadmap to develop harvesting strategies including an analysis of applicability and trade-offs between the three proposed harvest approaches for the key stocks (paragraph 135).
117. This led to a consultancy to implement the requests of the MoP, in two phases. The first one would carry out a generic evaluation of the three proposed approaches and the second would focus on a roadmap towards the development of the strategies. The evaluation report⁶⁹ was examined by the SC 7 in 2022. Without entering on the highly technical discussions relating to the consultancy's findings, which the SC endorsed, the study concluded that it will be extremely challenging to develop a single strategy for all SIOFA major resources, *since certain control parameter value choices would be likely to need to vary substantially from stock to stock, requiring stock-specific as well as generic analyses to proceed further*. It suggested a number of steps to take at the initial stage of a recommended harvest strategy roadmap, including in particular a preassessment process requiring significant data compilation and interpretation

⁶⁹ Project SER2021-05: https://siofa.org/sites/default/files/documents/meetings/SC-07-INFO-12-SER2021-05-ToR2-HS-roadmap-report_rev1.pdf

work (paragraphs 116 and 121). In response to the study, the SC recommended the tenure of a two-day harvest strategy pre-assessment workshop, scheduled March 2023, after MoP 9 agreed on the SC recommendations (MoP 9 Report, paragraphs 130-131). We find it noteworthy that the SC asked the Secretariat to compile all available data on the three key species and encouraged CCPs to conduct characterisations of their fisheries for these 3 resources, for presentation at the workshop (paragraphs 125-126), in light of the substantial efforts already carried out by the SC to assess the resources in previous years. SC discussions reflect expressed concerns by some of its members that this process, likely to be lengthy and laborious, might prevent SIOFA to take urgent management action if the need arises for a given fishery, but the consultant indicated that *the proposed preassessment process is flexible and that the objectives and timelines could be adapted to provide interim advice more quickly for such urgent situations* (paragraph 123). As we have already mentioned in Section 1.1, above, SC 8 discussed in 2023 harvesting strategies in depth and made a number of recommendations to the MoP as to how to conduct the work needed for their development. We have reviewed this work in Section 1.1, above. In particular, the SC outlined the need for interim decisions regarding key species as to reference points and harvest control rules, while – in our understanding – progressing the development of strategies in parallel.

ASSESSMENT

118. It is our overall assessment that, at this time, SIOFA does not apply the Precautionary Approach as it should. This is a bold statement, but the Panel, having examined the interaction between the SC and the MoP in particular, sees three clear elements that justify it. First, despite having conducted stock assessments for two of the key fishery resources, orange roughy and alfonsino, we do not believe the state of these resources is sufficiently assessed so as to conclude that they are in good condition. Assessment results are uncertain enough to warrant precautionary measures, in our view, in addition to which, there is no assessment at all for the third key resource, toothfish, and no apparent willingness of CCPs to rely strongly enough on CCAMLR's work to conserve toothfish populations clearly acknowledged as shared with the neighbouring organisation. In sum, despite statements to the contrary arising from MoP reports, we believe SIOFA has not been able yet to really know what state its key resources are in, and what levels of exploitation are sustainable. It is managing uncertainty with low, if any, levels of precaution and allowing, for the most part, fishing activity to continue with little or no constrain, exception made of the 2 applicable toothfish TACs which, in themselves, were adopted without a clear scientific basis for their quantification. Second, the Panel notes how management-related advice is sometimes rendered by the SC on the basis of compromises among its members, leading to a formulation of recommendations without a clear indication of the action needed on the part of the MoP, and this often in turn leads to inaction by the latter. The Panel recognises the technical complexity involved in assessing the key stocks, but draw attention to the fact that in such conditions, the Precautionary Approach is all the more relevant as a guide for decision-making. We welcome MoP's acceptance of SC programmatic and work-related recommendations, as they should lead to a more robust basis for the adoption of conservation measures, but feel that the dialogue between scientists and managers is lengthy and marked by recurring conversations between the two bodies perhaps beyond what would be needed. There is always room for more research, more data collection, more development of methods to work on the data. In the meantime, though, conservation must be ensured in a committed, precautionary way. In our view, the concept of stock recovery should also be more present in SIOFA work than it is. In fact, our research tells us the concept is just absent. Third, resources other than toothfish, orange roughy and alfonsino are not being really managed, with important fisheries taking place on them, notably oilfish but also other species trawled in the Saya de Malha Bank, for instance. These fisheries could well be the future of SIOFA, in economic terms. However, the Panel believes that unless they are properly dealt with by SIOFA, their sustainability might be at risk. We

welcome SC's recent work towards creating the basis for this management. However, it is a concern that it might take a long time before this work can set the foundations for robust management, as SIOFA must essentially build such foundations from scratch. Again, the Panel must caution against deferring precautionary action on the basis of ongoing work towards assessing the status of these stocks.

119. The three elements described above plead in favour of SIOFA's making a committed step toward defining a clear framework for the provision of advice. Such a framework could build on best practices and provide the means for the SC to render its advice in all independence, as it would establish a discipline and a fair science-management interface. It would also, in fact, operationalise the implementation of the Precautionary Approach and facilitate a predictable management strategy based on long-term, rather than short-term considerations, creating the basis for stable long-term management plans. Another notable benefit lies in the ease of strategic planning such a framework would afford, which is a particularly relevant element in this context, given SIOFA's limited resources and, therefore, needs for prioritisation. The Panel refers to existing possible models for inspiration such as the ICES advisory framework or others already implemented by scientific or managerial fishery bodies at a national or regional level⁷⁰.
120. With regard to the development of harvesting strategies, the Panel assesses favourably SIOFA's commitment to this task and encourages CCPs to maintain its commitment for what is likely to be a lengthy and laborious road ahead until the tool becomes usable. In the absence of a general framework for the implementation of the Precautionary Approach, this can be an effective tool to ensure precautionary management of key stocks, and CCPs should be encouraged to take every opportunity arising from the work ahead to extend its ambition to all SIOFA resources and ultimately set the harvest strategies as the keystone of an overall Precautionary Approach framework for wide use in the conservation and management of resources in the Area. However, the work in progress towards the development of harvest strategies should never become a reason for delaying precautionary measures for the key stocks. In this sense, the Panel notes, as discussed in Section 1.1, above, the recommendations issued by SC 8 in 2023 to advance the development of stock reference points and harvest control rules. We would hope both lines of work develop in parallel towards a robust assessment and advice system for SIOFA. In our view, it is most urgent that stock assessment is strengthened as a matter of high priority and that precautionary management principles are followed for as long as stock status uncertainty persists. In order to secure the key latter element of precaution, the Panel believes this work should be undertaken in such a way that SIOFA can establish and effectively use a scientific advisory framework for the implementation of the Precautionary Approach as soon as possible.
121. In any event, the Panel must highlight the fact that the most regulated fishery in the Area – the longline fishery for Patagonian toothfish – is the one that yields the least value, in terms of catch volume economic returns. This is a fishery that could be easily regulated in a joint effort with CCAMLR if CCPs would agree to approach the cooperation with this other organisation beyond the exchange of data and information, to progress for a true co-management. The Panel believes the SIOFA toothfish fishery, taken in an isolated way, cannot possibly be economically sound for the fleets, unless these are also operating in CCAMLR. SIOFA should place itself in a position where it is beyond reproach from any indications that activities in its Area undermine CCAMLR's conservation efforts. If the fleets operating this fishery in SIOFA are indeed also fishing in CCAMLR, there is a clear basis to ensure co-management and utilise CCAMLR's scientific work – rather than deferring regularly to a future stock assessment by a SIOFA SC already supporting a considerable workload – to ensure full compatibility between the measures adopted by both organisations on each side of the Area boundary. Also, SIOFA should make every effort to prevent

⁷⁰ See for example, NAFO: <https://www.nafo.int/Portals/0/PDFs/fc/2004/fcdoc04-18.pdf>

the toothfish fishery from expanding into areas outside the 2 established management units under CMM 15 in the future, by expressly prohibiting such expansion or extending the management units as required, except where a regulation of new and exploratory fisheries is in place and assessed as robust. The Panel notes, in this regard, the recommendations issued by SC 8 in 2023 (paragraph 154) and would encourage CCPs to accept and implement them promptly.

122. As to spatial measures, the Panel believes that SIOFA CCPs have received sufficient scientific advice to decide on area closures and that the absence of a management plan for them, although desirable, should not stand in the way of adopting such closures for areas in which information available suggests VMEs are present.
123. The development of tools for supporting precautionary management of fishing activities – including the SIOFA BFIA, footprint and the mapping of VMEs – has been now completed. However, it is unclear to the Panel whether CCPs have an agreed understanding of how they will be used as a tool for the design and implementation of future or revised CMMs. With regard to CCP BFIA, the Panel is unclear as to whether the SC has been able to apply sufficient scrutiny on their conclusions, based on the reported information about the work done on them. Such an in-depth scrutiny may be, in our opinion, beyond the time and resources currently available to the SC.

Nr	Recommendation	Priority (H/M/L)
10	The Panel recommends SIOFA CCPs undertake the development of a framework for the provision of Scientific Advice that takes into account best international practices, whether or not combined with a framework for decision-making at managerial level in accordance with the Precautionary Approach. This could accompany or complement the already decided work line dedicated to the development of harvest strategies but would provide the basis for an urgent consideration of precautionary measures in the short term.	M
11	The Panel recommends SIOFA discusses with CCAMLR concrete options to co-manage toothfish stocks shared between the 2 organisations, and establishes either a prohibition of fishing for this resource outside established toothfish management units or revised the units as required so no activities escape the conservation measures established for this resource.	H
12	The Panel recommends SIOFA CCPs to urgently agree on precautionary measures regarding alfonsino in light of the significant level of catches, second in the Area by weight, and of the fact that the stocks' biological complexity makes it challenging to adopt measures other than precautionary, at least in the short-to-medium term. Effort and catches should be constrained to the lowest possible levels.	H
13	The Panel recommends SIOFA CCPs adopt precautionary measures for target stocks other than the three key stocks of toothfish, orange roughy and alfonsino.	H/M

1.5.3. Allocation of fishing rights among CCPs and provisions for new entrants

124. The establishment of *criteria for and rules governing participation in fishing* is one of the functions of the MoP listed in Article 6(1) of the Agreement (sub-paragraph k). Paragraphs 2 to 4 of the same Article specify the requirements for the MoP when setting such criteria, notably by reference to UNFSA principles, *inter alia*. There is no obligation to set such rights (paragraph 3 uses the verb “may”), and indeed SIOFA CCPs have taken no decisions so far in this regard. Effort limits apply under CMM 01 for bottom fishing activities and TACs apply for the 2 toothfish MUs under CCM 15⁷¹. In the case of effort limits, they are established by each CCP based on a 12-month limit calculated by each CCP as the average annual level in active years over a representative period for which reliable data exists (Article 10 (a)(i)). CCPs with bottom fishing activities, albeit not all of them, have indicated their applicable limits in the notifications made to SIOFA under CMM 01 paragraph 10(2)⁷². The Panel has not identified rules for the closing of a fishery based on exhaustion of effort limits, contrary to what applies to toothfish TACs under paragraph 16 of CMM 15. The toothfish fisheries will be closed, via notification to CCPs by the Secretariat, as soon as 90% of the catch limit is reached. Catches are monitored through daily and monthly catch reports of *Dissostichus* spp submitted by CCPs, according to the same CMM 15 paragraphs 16 and 17.
125. Article 6 (3)(b) also foresees the possibility for the MoP *to allocate catch quantities for exploration and scientific research*. This has not been acted upon, since CCPs have not yet reached consensus on the regulation of fishery research activities or exploratory fisheries in the Area⁷³. As to the provision in Article 6 (3)(c) concerning the setting, if necessary, of fishing opportunities for non-Contracting Parties there seems to have been no demand and no need to do this either, in the absence of allocated overall SIOFA limits on catches or effort.

ASSESSMENT

126. The Panel does not see an urgent need for SIOFA to establish rules for the allocation of fishing opportunities either to CCPs or new entrants. We would nevertheless encourage CCPs to consider developing such a framework in order to prevent that its absence stands in the way of adoption of future catch or effort limits if they become necessary for the sustainability of the resources. We would also recommend CCPs consider rules and mechanisms to close fisheries when national-based catch and/or fishing effort limits are close to exhaustion.

Nr	Recommendation	Priority (H/M/L)
14	The Panel recommends SIOFA CCPs engage in discussions towards a future regime for the allocation of fishing rights.	L

1.5.4. Unregulated and new and exploratory fisheries

127. With regard to unregulated fisheries, the overarching nature of the provisions set forth in CMM 01 for bottom fishing entails that all such fisheries can be deemed regulated in the SIOFA Area, based on a freeze of effort limits, to which TACs add on in the case of longline fishing for

⁷¹ See Section 1.5.2, above.

⁷² They are published in the SIOFA website at this link:

<https://siofa.org/sites/default/files/files/SIOFA%20INTERIM%20BOTTOM%20FISHING%20MEASURES%20-%20compilation%20by%20CCPs%20%282022-06-24%29.pdf>

⁷³ See Section 1.5.4 below.

Dissostichus spp in the 2 established MUs for this resource. With regard to fishing with gears other than bottom ones, such activities are only subject to SIOFA monitoring, control and reporting CMMs. Finally, some technical measures apply under CMM 13 in order to mitigate seabird bycatch. Whether or not a discussion is warranted on the appropriateness of the relevant levels of regulation, there are currently no fisheries being conducted in the Area by CCPs to which some degree of regulation does not apply.

128. With regard to new fisheries, these can relate to either a) the development of a fishery for a species not previously targeted; b) the development of a fishery for a species until then targeted with a different gear (e.g., if a trawl fishery for toothfish were to become viable in the Area); or c) the expansion of an existing fishery into areas until then unexploited. In light of available information, hypotheses a) and b) are not of any significant relevance with regard to SIOFA. In contrast, expansion of fishing to areas not previously exploited is in our view quite relevant. In this regard, SIOFA's efforts to build, and agree on, a fishing footprint deserve close attention.
129. It worth first recalling that CCPs have in fact not agreed on a definition of new fisheries, despite proposals tabled to this end in the past, starting at MoP 5 in 2018. There has been no progress to date towards an agreed definition since this discussion is tightly linked to the development of measures to regulate fishery research activities and exploratory fisheries (see further below). However, this has not prevented SIOFA to invest considerable efforts in defining the fishing footprint.
130. **The establishment of the footprint** is mandated under CMM 01 paragraph 7(a) as a request for the SC to provide advice to MoP by 2020. Paragraph 20(a) sets the obligation of CCPs to submit *relevant data on the spatial extent of its historical bottom fishing effort (...) expressed as grid blocks of at least 20 minutes resolution or, if available, a finer scale* to the SC session held in 2018 (SC 3). Furthermore, CMM 01 establishes a clear link between BFAs and the SIOFA footprint by excluding new BFAs from being accepted if carried out *after* the MoP has agreed on a SIOFA footprint (paragraph 22). In any event, the development of the SIOFA footprint, as of 2018 onwards, has been laborious, at times affected by issues of data confidentiality, discussions about appropriate mapping scale, whether or not to establish a footprint by gear (bottom trawl vs longlines) or a cumulative one. These elements have been the subject of a continued conversation between the SC and the MoP. In 2020, SC 5 issued an explicit request to the MoP to clarify the intended use of the footprint (SC 5 Paragraphs 49-50). However, MoP 7 deferred this discussion to the following year. In the meantime, SC 6 discussed possible guidance to CCPs in this regard, and its report notes how various possible purposes were highlighted by SC members, but could not find agreement on a recommended spatial scale. Once again, the SC had to ask the question to CCPs (paragraph 96), noting that depending on what purpose is considered, the specifications of the build would change. For example, if the footprint were to be used to constrain overall SIOFA fishing expansion, then the footprint should use the best available spatial resolution (or mix of spatial resolutions as dictated by CCP data availability) and be fixed to a historical period (rather than being regularly updated). If the footprint were to be used for BFAs, it would need to be regularly updated. For management purposes, the footprint would need to indicate the level of effort within each grid cell across a fixed grid size.
131. Of particular interest is the fact noted by SC 6 (paragraph 94) that the "draft" footprints prepared by the Secretariat for its consideration⁷⁴ showed an expansion of the SIOFA footprint that *could not be solely explained by the addition of data from CCPs that newly acceded to SIOFA in the later years of the study period*, as well as the limited availability of historical fishing data.

⁷⁴ The draft was submitted in SC document of reference SC-06-28.

132. The discussion held by CCPs at MoP 8 in 2021 (paragraphs 101-110) were inconclusive and did not really provide the clarity of purpose requested by the SC. Various CCPs expressed concern as to how the overall SIOFA footprint could be used as a means to spatially constrain individual CCPs fishing activities or even create spatial entitlements for any given fleet. Clearly, the SIOFA footprint would allow constraining the spatial extension of fishing activities in the Area as a whole, but CCPs had no clarity on the effects of such tool on the control of individual flags. It is also noteworthy that at MoP 8, the issue of the recently observed expansion of fishing into areas not yet mapped within the “draft” footprint was not raised at all. However, CCPs were able to agree on a way forward by tasking the SC (paragraphs 101-110) with preparing and evaluating *the usefulness of a hybrid footprint map using set level information (start and end of haul); 20-minute resolution; and 30-minute resolution data for management purposes and in accordance with paragraph 7 of CMM 2020/01* (paragraph 110). The hybrid nature of the footprint refers to both the fact that the mapping would indicate historical and recent footprint and would use two different spatial scales.
133. An almost finished footprint of historical and recent activities at 20' + 30' square resolution was prepared by the SC's PAEWG and endorsed by SC 7 in 2022 (paragraph 180). SC 7 recommended MoP use this footprint in the interim, while verifying that all CCP footprints are encompassed in it. The SC also recommended the MoP *consider how new fishing should be considered once a bottom fishing footprint is agreed* (paragraphs 183-184). MoP 9 noted these recommendations and, importantly, agreed (paragraph 115) that any update of the footprint would include data up to, and not beyond, 2020. This latter decision entails that the spatial expansion observed by SC 6 in 2021 based on data from the previous year would be included in the footprint, but no further expansions would be allowed any more. This is an important decision, managing the risk that any fleet would seek to expand its activities to new areas before the footprint is completed and adopted formally by the MoP.
134. In 2023, SC 8 finalised the footprint and recommended it to the MoP for adoption (paragraphs 86-89, 92-95 and 335.i). SC 8 recommendations to the MoP include the possibility of using the footprint, *if required, for compliance purposes* (paragraph 93) and also suggest the MoP considers the footprint's impact on the implementation of CMM 01, notably with regard to how new fisheries are dealt with (paragraph 95).
135. As already noted, CCPs have not yet agreed on a definition of “new” fisheries. The request made by SC 7 and SC 8 that the MoP discuss how new fishing should be considered once the footprint is completed may be interpreted as suggesting that the footprint can indeed be used in order to consider “new” fishing any activities that would seek to operate outside the footprint in the future. However, in the absence of a SIOFA CMM regulating the initiation of a new fishery, it is doubtful that the mere existence of the footprint is legally sufficient to constrain the spatial extension of fishing by any CCP vessels. It is also important to note, of course, that the footprint relates only to bottom fisheries, so the matter remains fully open in respect to the significant fisheries using pelagic gears conducted in the Area.
136. The same must be said in respect of research activities and exploratory fishing. Other than the general duty to cooperate under the principles set forth in the Agreement and the obligations of flag States codified therein (Article 11), these activities remain subject to no SIOFA regulatory framework (although they may be regulated at flag level). A proposal to regulate research activities was first discussed by MoP 4 in 2017. A proposal pertaining to the regulation of new and exploratory fisheries in the Area was discussed by MoP 6 in 2019. Whether both comprised under a single CMM or in separate ones, discussions, including during the intersessional period, have continued to date. In 2019, an initiative to revise CMM 01 on bottom fishing to progress from interim to permanent measures also comprised the possibility that research and

exploratory fishing rules would be dealt with in such permanent framework. No revised proposals have been tabled on these matters in 2020, 2021 or 2022⁷⁵.

ASSESSMENT

137. The Panel welcomes the completion of the SIOFA bottom fishing footprint and cumulative BFIA and encourages CCPs to agree on their use to their full potential. To this end, CCPs should make every effort to find agreement on their use for the purposes of management.
138. In this respect, the Panel believes the footprint would allow SIOFA to consider any fishing activity intending to expand spatially beyond the limits of the footprint as a new fishery, except where the intended activities would be regulated as exploratory. Any new fisheries should be subject to a prior specific impact assessment, taking into consideration, among others, the work done by the SIOFA scientists towards the mapping of VMEs in the Area. However, in our view, CCPs will need to define new fisheries, in continuation to discussions already had on this subject, and consider also new fisheries within the footprint if they concern resources not previously targeted or the use of gears not previously used.
139. The Panel is also of the view that SIOFA CCPs should step up their efforts to create a regulatory framework for exploratory fisheries and build on best practices to this end, so that these fisheries fulfil their purpose to reinforce the scientific knowledge of the fishery resources and ecosystems occurring in the Area. We would caution, however, against a regulatory framework that would perpetuate exploratory fisheries. They should be regulated with due focus on their temporary status, lest they become regular fisheries under another name. SIOFA should be proactive rather than reactive when regulating new and exploratory fisheries and prevent instances where “new” fishing happens without consequences or shared concern.

Nr	Recommendation	Priority (H/M/L)
15	The Panel recommends SIOFA CCPs agree on a definition of new fisheries and discuss a regulatory framework for new and exploratory fisheries incorporating the highest standards derived from international best practices. The framework should make proper use of tools already developed by SIOFA such as the fishing footprint, BFIA and VME mapping.	H/M

1.5.5. Application of uniform principles and procedures across all SIOFA fisheries resources

140. In the absence of an agreed overall approach to the implementation of the Precautionary Approach or to the provision of advice by the SC, there is no framework of reference to assess whether CCPs apply uniform principles and procedures for the management of the SIOFA fishery resources. CCPs discuss on priorities and react to advice on a case-by-case basis. The most determinant factors for the conservation and management of resources in the Area, still at this time, seem to arise not from SIOFA regional measures, but from national regulations applicable to each CCP’s fleet. This issue, therefore, would perhaps be better framed if a process was in place in SIOFA to ascertain whether such national measures can be deemed to respond, if not to uniform at least to equivalent principles. However, this is not something that SIOFA has chosen

⁷⁵ See also Section 1.5.6. below.

to develop. To some extent, the SC's assessment of compliance by CCP BFAs with the agreed standards⁷⁶ may be seen as filling this role, but only to a limited extent.

141. The views of stakeholders in respect of this issue are mixed. There are instances arising from MoP reports where CCPs have confronted opposing views about the matter, which can perhaps underlie such feedback. Views have on occasion been expressed that toothfish fisheries are given much attention while others such as alfonsino are not as carefully considered, whereas toothfish represents a really small percentage of SIOFA total catch, around 1% in recent years, as can be seen in Table 4, below.

Table 4: *Percentage of alfonsino, orange roughy, Patagonian toothfish, and oil fish of the total catches in SIOFA. Data provided by the Secretariat.*

Year	Alfonsino	Oilfish	Orange roughy	Toothfish
2015	14%	9%	3%	0%
2016	13%	26%	1%	0%
2017	22%	35%	5%	1%
2018	19%	41%	5%	3%
2019	23%	25%	7%	1%
2020	28%	35%	7%	1%
2021	26%	18%	6%	1%

142. From the same data, alfonsino is now the largest component of SIOFA catches, surpassing oilfish for the first time since 2016. As noted in Section 1.5.2, above, the regulation and management of alfonsino fisheries can only be considered limited under CMMs 01 and 15. Oilfish, however, is targeted by pelagic longlines, and therefore CMM 01 does not apply to this fishery, despite the fact that it has been until 2021 the largest proportion of the total catches in the Area, at 29%. According to the Overview of SIOFA Fisheries 2022 (Table 1 in Section 3), 49 pelagic trawlers were active in SIOFA in 2021, representing 80% of the total fleet operating in the Area (61 vessels).

ASSESSMENT

143. The oilfish fishery is, together with alfonsino, the most important in volume of catches in the Area, and the largest of all in terms of the size of the fleet active in it. Although pelagic longliners carry in principle a low risk to VMEs, they may have an impact on the biodiversity in the water column and associated species such as seabirds. Efforts should therefore be made to develop the necessary basis to manage the resource at SIOFA level.
144. As already mentioned, the Panel is of the view that there is some imbalance in the attention given by SIOFA to fisheries other than the toothfish fishery, the latter being regulated in far more detail under CMM 15, for example, than those of the other 2 key resources, orange roughy and alfonsino – as discussed in Section 1.5.2, above. The difference is even more marked when considering species other than key stocks, for which regulation is almost nil at regional level. This should be corrected. We believe the development of a framework for scientific advice and the implementation of the Precautionary Approach, as recommended in Section 1.5.2, above, will

⁷⁶ See Section 1.5.2, above.

contribute to creating a more consistent implementation of management principles across all SIOFA resources.

Nr	Recommendation	Priority (H/M/L)
-	Recommendations nr 10, 12 and 13, above on the implementation of the Precautionary approach apply also for the purposes of the issues assessed under this criterion.	-

1.5.6. *Conservation of marine biodiversity and minimisation of adverse fishing impacts*

145. It is safe to state that SIOFA has put the protection of biodiversity at the forefront of its priorities since its inception as it is stated as one of the principles of the organisation in Article 4(9) of the Agreement. In the SIOFA context, focus is naturally placed in the protection of the deep-sea environment, in particular of VMEs occurring in the deep, since fisheries activities in the Southern Indian Ocean's ABNJ, i.e., in the Area, have traditionally been carried out on seamounts, rises and ridges for the key demersal stocks, although more recently, fisheries in the Saya de Malha bank have gained much momentum. As we have noted earlier in this Report, the establishment of SIOFA proceeded in parallel to the international debate on bottom fishing and the protection of the deep-sea VMEs, which led to the milestone UNGA Resolutions 61/105 (2006) and 64/72 (2009).
146. This can explain the fact the very first CMM adopted by SIOFA was CMM 01 on interim management of bottom fishing. In this Report, we have already commented on the some of the rules and processed provided for in CMM 01 in various Sections. Here, we focus on those among the CMM's provisions relating to the protection and conservation of VMEs, some of which have already been noted, namely the establishment of 5 interim closed areas in 2018⁷⁷, the BFIA requirements⁷⁸, the mapping of where VMEs are known to occur or likely to occur⁷⁹, a standard protocol for future protected areas and a SIOFA bottom fishing footprint (paragraphs 5 and 7)⁸⁰. In addition, CMM 01 incorporates a move-on rule in case of an encounter with VME (paragraph 13) with applicable triggering thresholds of VME species by-catch (see below). CCPs are also under an obligation to constrain the spatial distribution of their bottom fishing effort (save for lines and traps) to recently fished areas (Article 10(a)(ii)). We have also already noted CMM 01's provisions for scientific observer coverage (paragraphs 39-43). Given the crucial role observers play in the implementation of VME protection measures, it is important to ensure robust levels of coverage. CMM 01 provisions in this respect are demanding for bottom trawls, at a 100% coverage requirement for the duration of the trip. However, they are less stringent for other gears, at a 20% coverage requirement. In addition, it is not clear from Paragraph 39(b) whether this latter percentage applies to time spent in the fishery within any one-year period, to trips, to the fleet deployed or to other criteria. In fact, CCPs have been reported as discussing this matter, for instance, as to whether the coverage applies to "events". The issue continues unresolved to date. The Overview of SIOFA fisheries 2022 presents in Table 6 a summary of the implementation of CCPs' observer programmes. From the information reported by CCPs, it is unclear that all of them interpret the requirements in the same way, notably on whether the percentage coverage requirement applies to trips, hauls of trip duration. Compliance with the percentage coverage

⁷⁷ See Section 1.5.2, above.

⁷⁸ *ibid.*

⁷⁹ https://siofa.org/sites/default/files/files/VMEMapping_FullReport.pdf

⁸⁰ See Section 1.5.4, above.

provisions has been subject to exemptions granted by the MoP to several CCPs on account of the impact of the COVID pandemic in recent years.

147. CMM 01 thus contains a mix of provisions, many of them programmatic, in particular with regard to the role of the SC in the development of the various tools just cited, with evolving deadlines for the provision of SC advice throughout its successive versions⁸¹.
148. In order to assess whether CMM 01 has been effective in protecting the deep-sea biodiversity in the Area and prevented adverse impacts, it would be necessary to review the data collected so far, in particular, regarding VME encounters and the implementation of the move-on rule. MoP 9 decided in 2022 on the holding of an intersessional workshop on the development of VME management which has been convening through 4 sessions between mid-December 2022 and mid-January 2023. SC 8 considered and endorsed many of the recommendations issuing from this workshop (paragraphs 273-289). SIOFA experts regularly review and revise, as appropriate, the VME taxa list and have considered the issue of a possible revision of the VME encounter thresholds which trigger the encounter protocol or move-on rules. However, there were no recommendations on thresholds revision coming out of the 2022-2023 VME workshop or from SC 8. The thresholds were specified in paragraph 12 of CMM 01 in 2019⁸², without change up to the current 2020 version. For longliners, the threshold is established as *the catch/recovery of 10 or more VME-indicator units (measured by volume) of species listed in Annex 1 (the VME taxa list) in a single line segment*. For trawls, the threshold is established as *more than 60 kg of live corals and/or 300 Kg of sponges in any tow*.
149. Whether or not these thresholds can be considered a good choice is hard to assess. With regard to sponges, the SIOFA threshold compares well to those adopted by NAFO (also 300 Kg), NEAFC (lower than 400 kg), or SEAFO (600/400Kg - fished/non-fished areas). It is however, significantly higher than the one adopted by SPRFMO, at 60 Kg since 2021. Table 2 in Section 1.2, above, already presented the recorded captures of VMES in the SIOFA database at a low taxonomic resolution. We note that coral and sponges predominate in terms of encounters and catch weight significantly above other types of bycatches. The frequency of encounters, however, cannot be properly assessed since the data on number of encounters is provided without context, namely what percentage bycatch events represent as a proportion of, for example tows, shots or even whole trips reported to SIOFA. We cannot know how frequent VME catches are in the course of bottom fishing in the Area, but we can state that, from our research, there seems to be no traces of a single occasion in which the VME encounter protocol has been triggered, suggesting that the thresholds established in CMM 01 have not been ever reported as reached or overshot.
150. As noted earlier, in 2019, a proposal⁸³ was presented to MoP 6 which sought to progress CMM 01 into permanent measures. The proposal was not of a draft replacement CMM, but rather a summary of what a future CMM on General Rules for bottom fishing could contain in addition to consolidating existing ones. This included provisions for distinguishing established bottom fishing fisheries from new or exploratory fishing, as well as the use of the joint fishing footprint for the

⁸¹ We note that the 2020 and current version still contains deadlines that seem in fact obsolete. SC dated requests in paragraphs 5 and 6, as well as the one in paragraph 12 are for 2020, i.e., for an SC session that was already in the past at the time the 2020 version was agreed by the MoP (which meets regularly months after the SC in any given year). Paragraphs 20 and 21 set a deadline for CCP submission of certain data as 30 days ahead of the SC meeting in 2018.

⁸² Not specified in the 2016 to 2018 versions of CMM 01 save by reference to the FAO Voluntary Guidelines for Deep Sea Fisheries, while awaiting SC advice on the matter.

⁸³ https://siofa.org/sites/default/files/documents/meetings/MoP6-Prop19%20AUS%20Proposal%20for%20a%20new%20suite%20of%20bottom%20fishing%20measures_0.pdf

purposes of managing these fisheries and dealing with new entrants. It is worth quoting one of the introductory passages of this document: *CMM 2018/01, the current measure, is an interim measure. It sets out tasking for the Scientific Committee, a range of general rules- including for bottom fishing impact assessment - and permits each CCP to implement unilateral catch or effort limits for certain methods. While it was important to implement rules early, these rules are ineffective for long-term management.* MoP 6 welcomed the proposal and agreed the proponent would lead intersessional discussions with other CCPs to further develop it (paragraph 135). However, an analysis of the results of successive MoPs provides no information as whether these discussions continued. Many SIOFA lines of work were deeply affected by the COVID pandemic. This may well have been one of them.

ASSESSMENT

151. The Panel is of the view that SIOFA's effort regarding the establishment of the bottom fishing footprint, the SIOFA BFIA and the mapping of VME's/bioregionalization in the Area must once again be welcome as important steps towards the conservation of biodiversity in the region. The data on species richness in the Area is by itself the best motivation possible to secure these important achievements deploy their full potential.
152. We must, however, note that SIOFA has not been so far able to progress to permanent bottom fishing measures. We would tend to agree with the authors of the proposal discussed by the MoP in 2019 towards general bottom fishing rules that the present rules continue to allow CCPs to regulate catch and effort in a unilateral uncoordinated way and that this approach is not sustainable in the long term. We also believe that the absence of a real push towards regional measures rather than a compilation of national regulations could be one of the reasons why SIOFA is unable to attract a commitment by all States that should be engaging in it, and also be the reason why SIOFA work might be characterised as a low priority among certain CCPs themselves. The fact is, RFMOs must secure a clear perception of their added value. And that added value resides primarily in their being a forum where collective measures are adopted and peer review of implementation is ensured, so that responsibilities, but also benefits, are fairly shared.
153. With regard to the implementation of the standing rules in CMM 01, the Panel notes with concern the difficulty in assessing how much of a problem VME encounters may be in the Area, since the information regarding this issue is not very transparent, possibly affected by confidentiality requirements, although we cannot be sure of this. The identification and listing of VME taxa has made slow progress but is now at a reasonably good stage and the publication of visual guides by the Secretariat is very welcome. This slow progress, however, has made it so that the discussion on encounter thresholds triggering a move-on rule has been equally laborious. SIOFA's current thresholds are once again under discussion and we welcome the fact that the SC work in this respect will take due account of what is being done in neighbouring RFMOs. The Panel believes, however, that SIOFA should have more transparency regarding the occurrence of VME encounters in the Area. Robust quantification of these impacts is lacking, even if data on VME catches is available. There seems to be no information regarding any individual instance where the thresholds were surpassed. This is a common problem also in other RFMOs. We feel the lack of a robust peer review of these issues may be one of the weakest aspects of the work carried out in RFMOs, including SIOFA. With the emergence of the newly finalised UNCLOS Agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, we believe all RFMOs will be under pressure to demonstrate they implement these tools effectively, as it should be. SIOFA would be well advised to have the means to show that VME encounters in its Area are indeed not a major problem, if that is the case, or take corrective action in case it is not.

Nr	Recommendation	Priority (H/M/L)
16	The Panel recommends SIOFA CCPs to make every effort to progress from the current interim arrangements for bottom fishing to permanent rules, retaking discussions on this issue from the proposal tabled in 2019 or an updated version of it. Recommendation nr 9 above, on a corpus of SIOFA rules, applies also for the purposes of the issues at stake here.	H
17	The Panel recommends the MoP requests from the SC an evaluation of the frequency of VME encounters and of the compliance of fishing vessels with the reporting and move-on rule requirements.	H
18	The Panel recommends that SIOFA CCPs expand their consideration of actions aiming at the conservation of biodiversity to fishing activities other than those using bottom gears, extending the concept of Impact Assessment to such activities as well.	M

1.5.7. Minimisation of pollution, waste, discards, catch by lost or abandoned gear, catch of non-target fishery resources, impacts on associated or dependent species.

154. With regard to **pollution and waste**, CMM 09 on Control⁸⁴ contains a prohibition in paragraph 8 to discharge plastics at sea save in 2 cases: when it is *necessary for the purpose of securing the safety of a ship and those on board or saving life at sea*, and when the discharge is accidental, provided in this case that *all reasonable precautions have been taken to prevent such loss*.
155. With regard to catches by **lost or abandoned gear**, CMM 09 sets out a number of rules to prevent loss or voluntary abandonment of gear, including the obligation in paragraph 7 for vessels to retrieve such gear when found and a clear abandonment prohibition. Retrievals, or failure to retrieve after reasonable attempt, are to be notified to the flag State and also reported to the Secretariat. In support of these rules, CMM 09 sets out in paragraph 5 the requirements for the marking of fixed gear, including the indication of the vessel's name and International Radio Call Sign, which allows tracking back lost gear in case responsibilities must be allocated for the loss. On the other hand, CMM 02 Annex E requires CCPs to submit data on lost or abandoned gear for consideration by the SC. In 2022, SC 7 requested the Secretariat (paragraph 142) to provide *a report on lost gear under CMM 2021/02 Annex A (...)* to its 8th session in 2023. SC 8 considered the Secretariat's report on lost gear⁸⁵ and noted only hooks and line traps had been reported as lost as mandated under CMM 02 on data standards (paragraph 314). It noted, however, that data on retrieval/recovery of lost gear is not reported to the Secretariat on a standardised way, despite its collection being as a task of on-board observers under CMM 02. SC 8 agreed to address this in future reports on lost and abandoned gear (paragraph 315).
156. As for **non-target catches** data are summarised in the Overview of SIOFA fisheries 2022, Section 6.2.1:

⁸⁴ See also Section 2.3, below.

⁸⁵ Document SC-08-INFO-08.

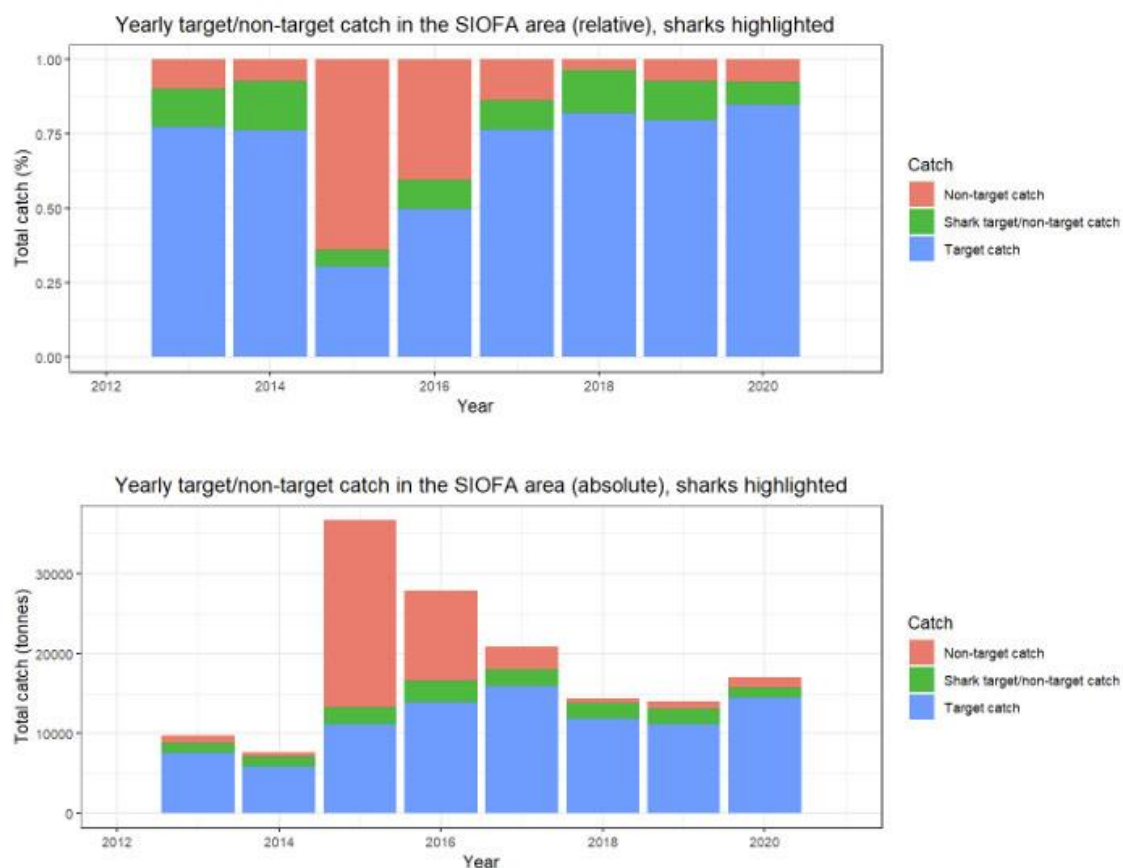


Figure 6: Data from target vs non-target catches in the Area, from *Overview of SIOFA Fisheries 2022*, Figure 4., Section 6.2.1. Upper panel: catch and non-target catch as relative values; lower panel: absolute values.

157. These figures suggest non-target catches typically represent about 25% of the total catch except during the years 2015 and 2016, where this percentage rose to, or over, 50%. The reasons for this sudden surge are not clear. In any event, during “typical” years, shark by-catch can be seen as representing a significant proportion of non-target catches. In terms of their spatial distribution, Sub-area 2 generally registers the highest level of catches in “typical” years, whereas the exceptional levels seen in 2015 and 2016 were registered mainly in Sub-area 8⁸⁶.

158. As for **discards**, available data suggests discard levels are relatively low in SIOFA fisheries. SIOFA collects discards data by species in its catch and effort databases. Their analysis indicates that most non-target species are landed and only a fraction discarded (at a proportion of +/- 3% depending on the year), but some discarding of target catches also occurs. SIOFA vessels typically discard around or below 100 tonnes of their catch per year. Like for non-target catches, 2015 and 2016 were exceptional years, with discards reaching their peak in absolute terms for the time series, at 1,500t⁸⁷.

159. With regard to **impacts on associated or dependent species**, CMMs 12 on Sharks and 13 on the mitigation of seabird bycatch adopted by MoP 6 in 2019 were watered down in the negotiations that led to their adoption. A shark finning ban deleted from the proposed text of CMM 12 and only longlining mitigation measures are established under CMM 13 for seabirds, whereas the original proposal also applied to trawlers.

⁸⁶ Overview of SIOFA Fisheries 2022, section 6.2.2, figure 5.b).

⁸⁷ Overview of SIOFA Fisheries 2022, section 6.2.5.

160. With regard specifically to **seabirds**, efforts were deployed in successive years to review and progress the mitigation measures. Further data collection is regularly requested by the SC, which recommended in 2021 at SC 6 that an Ecological Risk Assessment be carried out for these species (paragraph 133). This was done by means of a consultancy, whose results were considered by SC 7 in 2022. In our review of SIOFA's implementation of the Ecosystem Approach in Section 1.2 above, we have listed the main species of seabirds concerned on the basis of a study presented by ACAP to SC 7. Against this background, SC 7 issued various technical recommendations for consideration by MoP 9, among which, a specific management recommendation, namely that CCPs agree to implement IOTC Resolution 12/06 on reducing the incidental bycatch of seabirds in longline fisheries. CCPs agreed at MoP 9 to incorporate the IOTC mitigating measures into annex 3 of CMM 13, which now extend their scope to pelagic longliners, and indeed align with the IOTC measures by incorporating the spatial limit to fishing south of 25° S as well as the IOTC Resolution's table 1 of mitigating measures into annex 3. In 2023, SC 8 agreed to include a focus agenda item on seabird data collection and bycatch mitigation measures at its following session in 2024, inviting experts and stakeholders to participate and share their experience. It also requested the Secretariat to prepare a paper to provide an informative basis for such future discussions (paragraph 268).
161. Regarding impacts of SIOFA fisheries on **sharks**, since the adoption of CMM 12 in 2019, targeting deepwater sharks is prohibited in the Area. The measure was updated in 2022, although the amendment was essentially editorial.
162. SC 1 already reported in 2016 (paragraph 80) substantial deepwater shark catches in gillnets, but noted that CCPs were putting in place measures to prevent targeting and concluded at the time that sharks would not be listed as targeted species in SIOFA but just as bycatch. SC even considered the option of listing sharks among priority stocks for management, entailing the conduct of stock assessment, despite them being mostly by-catches. SC 1 however noted the challenges posed by species ID and the fact that these species would likely be data poor. As of 2016, no gillnet fisheries by CCPs have been reported in the Area.
163. Work by the SC (supported by the SERAWG) has focused on the identification of shark species of concern, 4 of which were so identified by SC 4 in 2016 from the catch data available, namely *C. coelolepis*, *C. granulosus*, *D. calcea* and *D. licha* (paragraph 164). SC has also regularly called for data improvement based in turn on improved species identification while urging CCPs to consider measures to mitigate the potential for the overexploitation of key species, in light of information and data arising from similar species globally. In 2020, SC 5 (paragraph 155) reiterated its request for urgent measures, citing possible options such as longline gear modifications, a prohibition to retain sharks onboard, live release where possible and move-on rules. MoP discussions were impacted by the COVID pandemic such that the matter was deferred to MoP 8 in 2021. However, that year SC 6 was unable to deal in depth with shark bycatch mitigation since SERAWG was unable to carry out any work on this issue.
164. In 2022, a consultancy study⁸⁸ was considered by SERAWG and presented to SC 7, focusing on mortality of deepwater sharks in SIOFA fisheries. SC 7's discussions on this study (paragraph 156) drew attention to the extremely high level of deepwater shark bycatch, with some SC members noting that they make up almost 60% of the retained catch in Sub-area 2, far higher than for other similar longline fisheries in other areas. One SC CCP representative went as far as

⁸⁸ Project PAE2021-02, presented to SC 7 as working document SC-07-37. This document is still classified as restricted and is not accessible to the public.

suggesting that the data was indicative of targeted shark fisheries⁸⁹. SC 7 endorsed SERAWG's recommendations regarding further data collection and the holding of a workshop in 2023⁹⁰ to assess the status of the species caught in SIOFA and discuss potential measures to reduce bycatch further, as well as examine mitigation measures with a focus on key areas and main fishing methods that catch them the most. The workshop would also review the lists of species of concern in CMM 12 and develop species ID guides. In the meantime, though, at SC 7 some CCPs recommended that, in areas where vessels are experiencing high shark bycatch, CCPs consider interim voluntary guidelines to reduce that bycatch (paragraph 161). MoP 9 endorsed the SC7 recommendations and discussed possible urgent gear changes such as non-wire traces on longline snoods and the use of non-fish bait, but failed to agree on adopting such measures, deferring further discussions until their consideration of the 2023 workshop results.

165. SC 8 reviewed the results of the workshop and made a number of significant recommendations to the MoP, including the following: implementing measures to sustainably manage Portuguese dogfish, a species now constituting the second highest species of catch among all demersal fish in the SIOFA Area in 2022, at a level that was the second highest on record (paragraphs 229-230); considering a catch limit for this species based on the average bycatch of this species over the previous 5 years, at 767.7t (paragraph 232); managing catches of three other shark species (*Centrophorus granulosus*, *Dalatias licha* and *Deania calceus*) on a precautionary basis until the SC is able to determine a sustainable catch. Apart from discussing and recommending other actions related to the improvement of the move-on rule to 5 nm, enhancements to data collection and future assessment of any measures decided now, the SC also discussed gear measures and noted that *a number of studies have shown the effectiveness of nylon traces as a shark bycatch mitigation measure, including for demersal longline fisheries* (paragraph 231). SC 8 also proposed researching skate by-catch in longline fisheries via a tagging programme (paragraph 246), and recommended updates to the list of species at high risk and of concern under CMM 12 on sharks, as well as a revision of the CMM as such to implement the various recommendations as required.

ASSESSMENT

166. SIOFA has adopted requirements for the prevention of plastic pollution and has also taken measures in respect of lost and abandoned gear. The panel welcomes the study that was discussed by the SC at its 8th session in 2023 on this topic and would encourage CCPs to take any necessary action as indicated by the results of the study.
167. The Panel notes that from the available data, SIOFA fisheries seem quite clean with low levels of discards. However, our attention is drawn to a general level of non-target catches of around 25% of total catches, which we consider significant. This is so especially on account of the fact that most non-target catches are landed, which means that these species represent valuable SIOFA fishery resources which do not seem to be considered for analysis and assessment in order to manage them.
168. Regarding seabird bycatch mitigation, the Panel welcomes the recent implementation in SIOFA of the relevant IOTC measures and believe CCPs should be encouraged to pursue the necessary related technical work proposed by the SC as soon as practicable.

⁸⁹ Back in 2016, the SC 1 report notes the occurrence of targeted shark fisheries in the Area, arising from the data submitted by certain CCPs in their national reports. See SC 1 paragraph 31 *et seq.* Such fisheries would become banned by 2019 under CMM 12.

⁹⁰ The workshop took place 20-21 March 2023.

169. Regarding deepwater sharks, the data presented in the SIOFA Overview of Fisheries clearly illustrates the high percentage of shark by-catches in the non-target catch data. The results of SC work on sharks suggest a particularly worrying situation in relation to Portuguese dogfish, with by-catch levels going as high as 75-80% of total catch in longliners in subarea 2 the period 2021-2022 (SC 8 paragraph 229). We see this issue as particularly relevant when assessing the effectiveness of SIOFA measures, which clearly fall short of a reasonable sustainability standard in this case. The Panel therefore believes flag State CCPs must ensure their vessels comply the ban on targeted shark fishing laid down in CMM 12 and commit to implement as soon as possible any mitigating technical measures regarding longliners, some of which have already been repeatedly discussed by the MoP. To this end, we would encourage CCPs to go a step further than voluntary guidelines as discussed by the SC in 2022, and aim for binding measures as recommended by SC 8. The Panel welcomes any further efforts for data collection as requested by the SC and encourages CCPs to agree tasking the SC with assessing the status of the shark stocks, especially the listed key species, extended to further species in case the SC finds grounds to recommend it be done. We welcome the holding of the 2023 sharks' workshop and hope the endorsement of its outcomes by the SC will facilitate the adoption of relevant measures in the short term.
170. The Panel also notes that the conservation of deepwater sharks is one of the key activities planned under the FAO DSF project, one of the 5 specific projects funded by the GEF for the 2nd Phase of the Common Oceans Programme. The Panel notes how SIOFA was regularly updated about the work carried out during the 1st phase of this Programme. Therefore, SIOFA should have an opportunity to make the most of the support this project can offer to progress shark conservation across all RFMOs through, among others, the dissemination of best practices and harmonisation on this issue with the Tuna project also launched under the GEF programme.

Nr	Recommendation	Priority (H/M/L)
19	The Panel recommends SIOFA CCPs to agree urgently on measures to reduce shark by-catches, in particular by implementing any mitigation measures that identified as effective by the 2023 specific workshop on sharks to take place under the aegis of the Scientific Committee, including precautionary catch limits for Portuguese dogfish. Recommendation nr 2 on the assessment of the status of shark stocks is also relevant for the issues discussed under this criterion.	H
20	The Panel recommends the SC effectively use the focused agenda item on seabird by-catch, decided by SC 8 in 2023 for future sessions, to identify necessary by-catch mitigation measures, including in trawl fisheries, as originally proposed at the time CMM 13 was adopted. SIOFA's cooperation arrangements with ACAP, but also with CCAMLR, should be strengthened including for the purposes of this work.	M/L

1.6. Capacity management

171. Article 4(b) of the Agreement sets as a General Principle of SIOFA the duty of Contracting Parties to take measures *to ensure that the level of fishing activity is commensurate with the sustainable use of the fishery resources*. Apart from the provisions in CMM 01 regarding effort or catch limits applicable to bottom fisheries (paragraph 10), there has been no consideration by CCPs of options to manage or constrain in any way the fishing capacity deployed in the Area. SC 1 (paragraphs 115 *et seq.*) did discuss possible options regarding bottom fisheries in 2016 (there were no pelagic fisheries operating under a CCP flag at the time). A freeze of the footprint of

(then) current activities was one option discussed. However, the choice was made in favour of a CCP obligation to set an effort limit for its fleet based on a reference period identified within agreed parameters. We note that CCPs have a choice under CMM 01 between catch and effort limits, whereby a freeze of effort at the levels marked by the chosen representative period is not obligatory⁹¹.

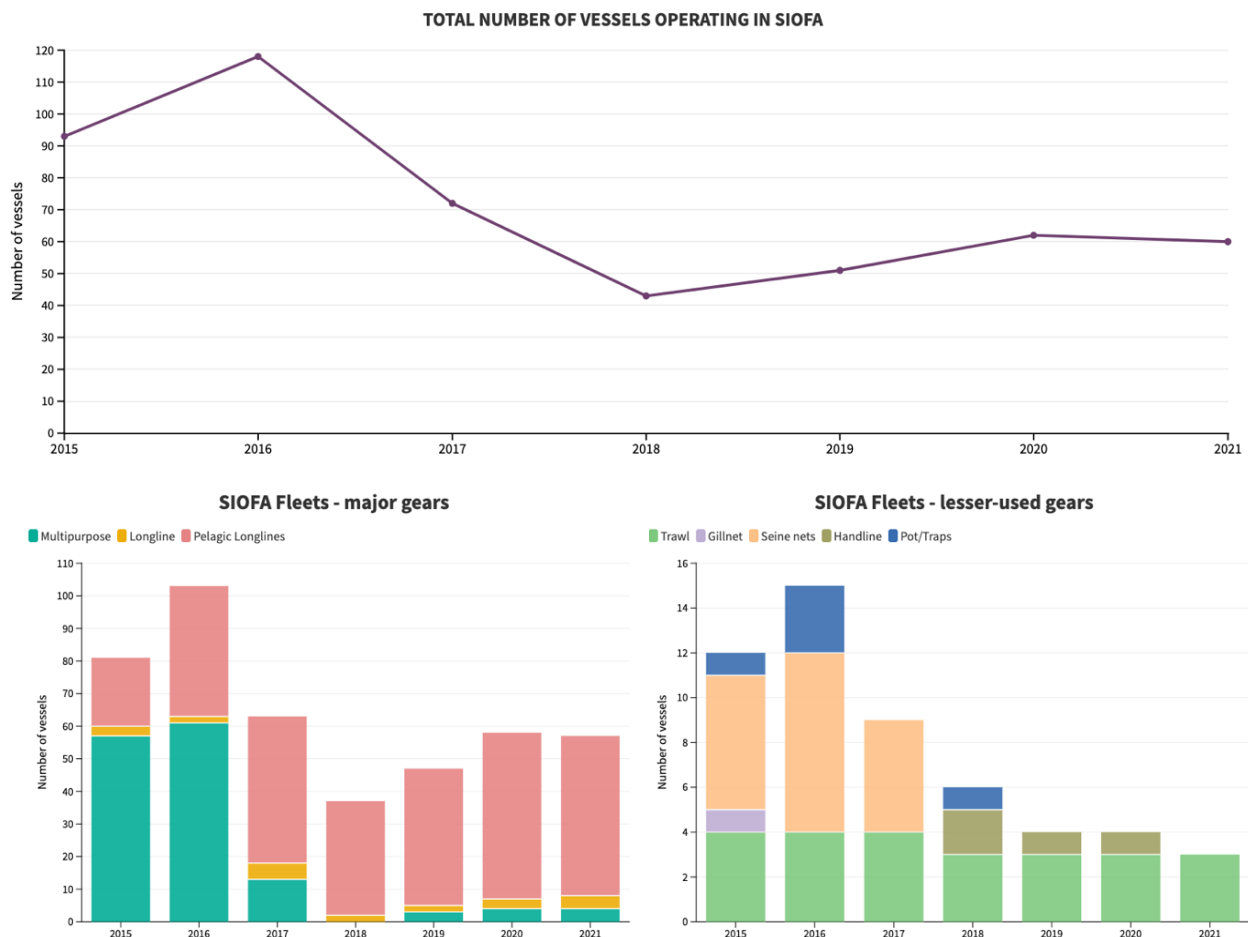


Figure 7: Evolution of the vessel numbers operating in SIOFA 2015-2021, in total and by gear (MP: Multipurpose; LL: (bottom) Longline; PLL: Pelagic Longline; GN: Gillnets; SN: Seine nets; HL: Handlines; P/T: Pots/Traps) Note that MP vessels may conduct HL, P/T fisheries, as well as a combination of longline and trawl. The figures for Source: data presented in table 1 of the Overview of SIOFA Fisheries 2021.

172. The data presented in the Overview of SIOFA Fisheries 2022 Section 3 provides an overview of the evolution of the capacity deployed in the Area 2015-2021⁹². The total numbers of vessels have varied significantly up and down over the time series. The Thai multipurpose (trawl and handline) fleet has reduced from 60 vessels in 2018 to 3 vessels in 2021. The Thai multipurpose fleet contributed 50% of the active fleet in the Area in 2018.
173. By 2021, 60 vessels were active in the Area, 80% of which are pelagic longliners (49), the rest being 4 multipurpose vessels, 3 trawlers and 4 bottom longliners. Gillnet fisheries were abandoned after 2015, the other lesser gears from 2018 onwards.

⁹¹ See also Section 1.5.6, above.

⁹² Note that the data includes fleets from CCPs that joined after 2015, namely Thailand (2017), China and Chinese Taipei (both 2019). The data reflects submission of historical data by all CCPs.

174. With regard to effort levels over the same period, the Overview of SIOFA Fisheries 2021, table 3 in Section 5 presents data in 3 different variables as per the choice made by different CCPs when reporting. Longline effort is measured by hooks deployed. Trawl effort is measured in shots and hours. The totals can be presented as follows:

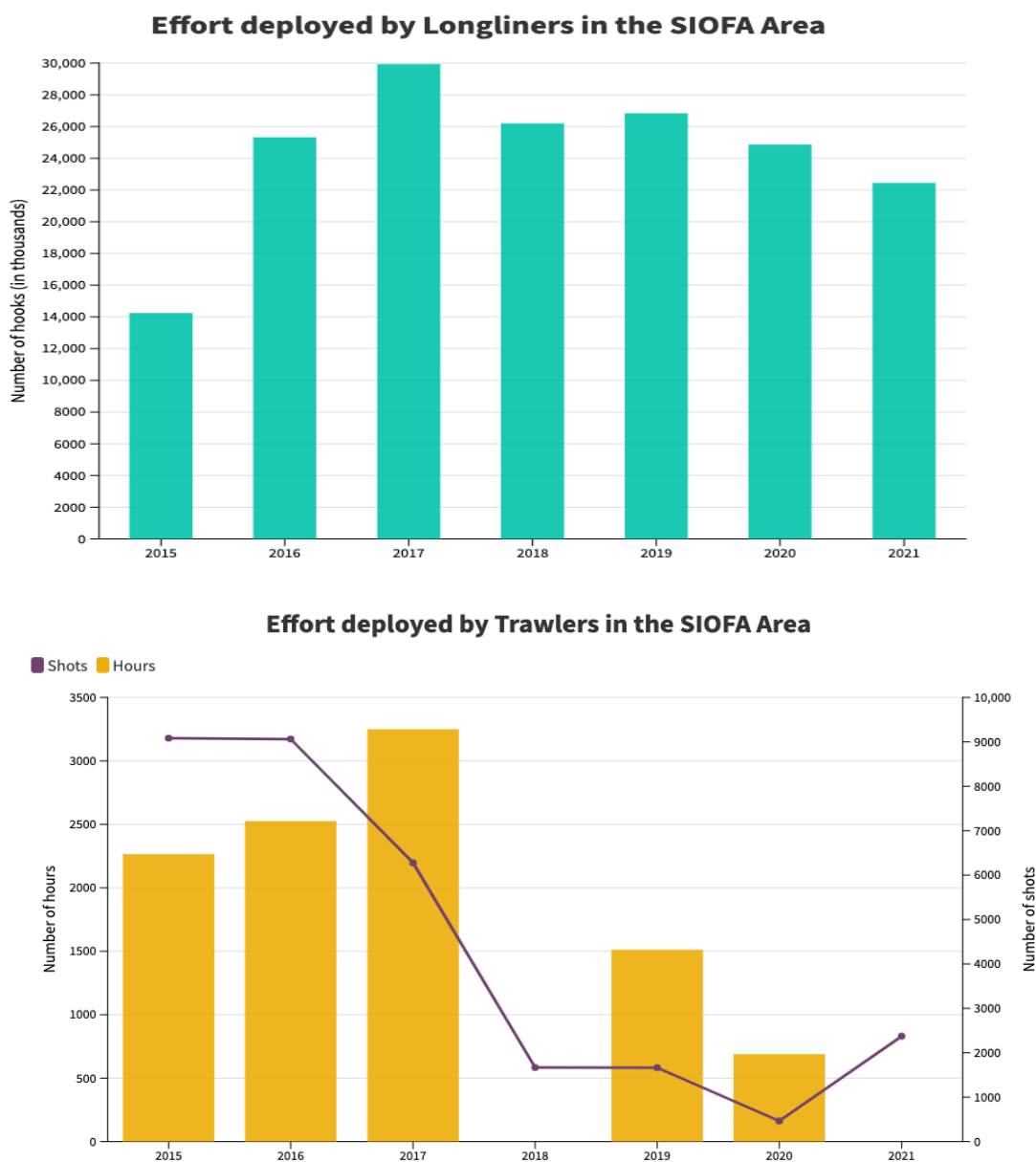


Figure 8: Evolution of effort deployed by vessel operating in SIOFA 2015-2021. Source: data presented in table 3 of the Overview of SIOFA Fisheries 2021. Data for 2021 is incomplete, since missing from 2 CCPs.

175. The effort of fleet data does not allow an assessment of the impact of the COVID Pandemic on the SIOFA fleets. It is actually before that period, in 2018, that a rapid decrease in effort deployed can be observed, only to recover somewhat the following year. COVID restrictions were generally adopted during 2020, so a fall in trawl effort that year could be related to the impact of the pandemic. This is however difficult to ascertain given the low numbers of vessels involved. Longline effort seems to register a slight decreasing trend since 2019, but this can neither be confirmed due to incomplete 2021 data.

176. Catch Per Unit Effort (CPUE) (unstandardised) data for main species are presented in the Overview of SIOFA Fisheries 2021 in section 6.3 (2015-2020). What can be observed from the graphs in the Overview is that alfonso CPUE peaked in 2019 and remained stable at that maximum in 2020 (Overview, figure 17). For orange roughy, CPUE is registering a significant increase since 2018 and is at maximum levels in 2020 for the time series (Overview, figure 19). Both species are caught with trawls. In the case of toothfish, caught with bottom longlines, CPUE peaked in 2018⁹³ and registers a slight decrease over 2019-2020, at relatively stable levels (Overview, figure 21). Data for hapuka is also offered in the Overview, possibly on account of significant catch increases seen in 2019 and 2020 (Overview, figure 23). Hapuka is targeted with bottom trawls. Finally, with regard to oilfish CPUE decreased significantly in 2019 but recovered in 2020 to near average levels in the time series (Overview, figure 25).
177. By 2021, 8 out of 13 CCPs have vessels operating in the Area under their flag. Of the remaining 5, 3 CCPs are not noted as conducting any fishing activities in the Area and 2 have not submitted a national report⁹⁴. It should also be clarified that one of the 8 CCPs with an active fleet does not carry out bottom fishing in the Area, only pelagic longlining. This fleet is the most numerous by a great difference and has the biggest volume of catches of all⁹⁵. For this fleet, the obligation of CCPs to establish flag-level effort and/or catch limitations established in CMM 01 paragraph 10 does not apply.
178. As already noted in section 1.5.6, above, CCPs whose vessels engage in bottom fishing must share at SIOFA level the measures they have taken under CMM 01 paragraph 10(1). These measures are to be compiled by the Secretariat and made publicly available in the SIOFA website. This has been done and the compilation is, at the time of writing, updated to February 2022⁹⁶. An examination of the information contained therein reveals that only 3 CCPs have shared their applicable limits, one in terms of catch limits and 2 in terms of effort limits as days at sea, but only 2 of them actually shared their chosen reference period. One CCP indicates only the numbers of vessels authorised to fish in SIOFA. 2 other CCPs mention the existence of effort limits at flag level as days at sea without providing the applicable limit. 4 CCPs indicate no bottom fishing activities in the Area or no fishing at all. Finally, 2 CCPs have not shared their national measures.
179. Among the 3 CCP fleets for which quantified limits have been notified, one has seen a very significant reduction in numbers of its active vessels in the Area since 2016, whereas the applicable effort limit has been – to our knowledge – maintained unrevised, as CMM 01 does not require adjustments in such a scenario and the compilation is published without indicating to what year corresponds the description of national measures shared by each CCP⁹⁷.
180. The work at SC levels requires continued efforts from CCPs to submit effort data for scientific purposes, as needed by the SC to carry out its regular tasks as well as particular processes like the SIOFA BFIA and the SIOFA bottom fishing footprint, among many others. This has no relation to SIOFA's ability to peer review the implementation of catch or effort limits by CCP fleets in accordance with CMM 01 paragraph 10 (1), since this review would need a process of its own

⁹³See also Section 1.5.2, above, regarding the increase in toothfish catches observed in 2018.

⁹⁴ One of the two CCPs in question just joined SIOFA as a cooperating non-contracting party only recently.

⁹⁵ See Section 1.5.5, above.

⁹⁶ <https://siofa.org/sites/default/files/files/SIOFA%20INTERIM%20BOTTOM%20FISHING%20MEASURES%20-%20compilation%20by%20CCPs%20%282022-06-24%29.pdf>

⁹⁷ In fact, the information contained in the compilation is quite obviously obsolete when cross-checked with the vessel numbers reported in the Overview of SIOFA Fisheries 2021 in at least one case.

where effort data in the appropriate format would be measured against the applicable limit, which as we just saw, is available from only 2 CCPs.

181. Against this background, it is understandable that views among SIOFA stakeholders regarding the organisation's performance with regard to this criterion are significantly divided. Stakeholders do not agree on their perception of SIOFA's performance regarding either action taken to prevent overcapacity or to monitor capacity and effort levels (cf. Annex II).

ASSESSMENT

182. SIOFA has not engaged so far in any process to identify **capacity levels** commensurate with the long-term conservation and sustainable use of fishery resources. This might well respond to a perception among a significant number of CCPs that the limited size of the fleets active in the Area places it at a very low priority, the more so that uncertainties in the status of key resources, and the absence of any assessment for others would render such a process technically very demanding for a result equally uncertain. The Panel can appreciate these possible considerations, which are not explicit in any MoP reported discussions but may be safe to assume. However, they would be more understandable in relation to the bottom fishing fleets, less so in relation to pelagic fisheries. They produce the highest volume of catches in SIOFA over recent years, harvested by the largest fleet. This is a fishery for which there is not even a common framework for CCP choices on input or output controls applicable to their individual fleets, and there is yet no stock assessment of the resources harvested. Even if the fishery is carried out by just one CCP, a continued low (very low) level of management of the fisheries in question can hardly be considered as compliant with the principles established in the Agreement on the long-term sustainability of the fishery resources under SIOFA's responsibility.
183. With regard to the **prevention or elimination of excess fishing capacity and effort**, it is our assessment that SIOFA is hardly equipped to act on the basis of the CMMs in place. There is no process whereby SIOFA, as an organisation, can monitor effectively whether the capacity deployed by any flag is commensurate with unallocated resources, or whether applicable effort limits by flag are being complied with. To start with, CMM 01 does not actually require CCPs to freeze their bottom fishing effort, as the option of freezing catches is equally acceptable. Moreover, CMM 01 does not require either, in a sufficiently clear way, that CCPs share their quantified effort or catch limits, and indeed only 3 CCPs have done so. As for fisheries other than bottom fisheries, the obligation does not even exist for CCPs to limit effort or share such measures.
184. This leaves only the option for CCPs to agree taking action to limit effort of capacity deployed in the Area based on a specific recommendation of the SC if the reported data in any given year were to register a significant variation upwards. In some cases, the MoP has expressly requested the SC to keep such data under close review to allow urgent action ahead of a certain deadline, for example, in relation with the possibility of advancing the date of the next orange roughy stock assessment now planned for 2025. Therefore, it is clear that SIOFA is equipped to monitor effort levels. What is undefined is the means by which CPPs would respond in case of potential risk of short-term overexploitation of any given fishery resource.
185. SIOFA CCPs may well decide to take common action to constrain effort levels (or catches, for that matter, something it has actually already taken place for toothfish) if the data shows a significant increase from one year to another, or even a sustained increase over a few years which the SC considers as carrying a risk of overfishing a resource. The Panel believes trends in CPUE for alfonso and orange roughy make these two species good candidates for such action, but notes MoPs have been unable to agree on it. The difficulty lies in the fact that such action would require

CCPs to abandon their well-established approach to apply effort (or catch) limits at a national level, thus entailing a deep revision of CMM 01. In addition, this change might also require an exercise in allocation quotas. Experience advises that such development can be quite challenging indeed. It is our expectation that should the need arise to constrain fishing activities, agreed TACs seem much more likely to find agreement among CCPs, as it happened with toothfish in 2019, than effort limits. In conclusion, SIOFA does **monitor effort levels**, but its CCPs are not, in our perception, interested in the use of capacity or effort management as a conservation measure at a regional level, nor are they likely to gain such an interest for the foreseeable future. It is the Panel's view, however, that were CCPs to re-engage in a consolidation and revision of CMM 01 with a view to progress its interim arrangements into permanent measures, which in our view they should as a matter of priority (see our Recommendation nr 9), capacity and effort measures should be at least discussed by MoPs to ascertain whether input controls can usefully contribute to the attainment of the sustainability objectives set forth in the Agreement.

Nr	Recommendation	Priority (H/M/L)
21	The Panel recommends SIOFA carries out a review of the effect of effort limits applicable to relevant fleets to determine whether such limits constrain the fishing activity or not, and that a clear determination is made on the potential use of capacity or effort limits as a fishery management tool, especially with regard to fisheries conducted with gears other than bottom gears.	M

1.7. Reporting requirements

186. The Panel is of the view that with regard to the assessment of SIOFA's reporting requirements it is useful to deal with both the conservation and management and the compliance and enforcement areas of the Review process together. We refer to Section 2.7 of this Report for our assessment under this criterion and the similar criterion listed under area 2, below.

2. Compliance and enforcement

2.1. Flag State duties

187. Notwithstanding the primacy of the responsibility of the flag State, as established in Article 11 of the Agreement, the compliance with and enforcement of the Agreement and the CMMs adopted under it is recognized as one of the principal functions of the MoP listed in Article 6. RFMOs help flag States in self-assessing compliance with their duties but also provide a forum for the provision of feedback from their peers in this regard, if CCPs are willing to engage in it. Article 11 contains the duties of flag State CCPs under the Agreement. CCPs are under an obligation to ensure their flagged vessels comply with applicable SIOFA rules and do not engage in any activity which undermines the effectiveness of such measures, or conduct unauthorized fishing activities in areas under national jurisdiction adjacent to the Area. Article 11 also mandates flag State CCPs to develop and implement a Vessel Monitoring System and make the conduct of fishing in the Area contingent on the issuance of an authorisation by the competent authorities. Flag States can only issue such authorisation if they themselves are able to exert effective jurisdiction over their flagged vessels in accordance with the provisions of the Agreement and other relevant provisions of international law. Other flag State requirements under Article 11 relate to the use of the tools and processes a flag State needs in order to exert effective jurisdiction, namely maintaining a record of flagged fishing vessels, the collection of complete and accurate data on

their fishing activities, and a national framework to investigate, and where appropriate sanction, serious violations of applicable rules. Article 11(3)(e) configures this obligation, however, as applicable to the greatest extent possible and focuses only on the response due from a flag State when informed of an alleged serious violation – within the meaning of the relevant UNFSA provisions – by any other Contracting Party, with a request to investigate. This is a provision creating a bilateral procedure between CCPs, but a report on its outcome must be provided to the MoP on completion.

188. Article 11 of the Agreement also makes it a duty of flag State CCPs to submit the annual report on their fishing activities to the MoP. This is a requirement SIOFA CCPs have considered as essential since the organisation's inception, even before a first set of CMMs was adopted in 2016. From an early stage, therefore, the MoP has been clear in emphasizing the submission of the annual national report⁹⁸ as an essential requirement without exception, even if only to confirm there have been no catches in the Area, and affirmed that non-submission constitutes non-compliance (MoP 4, paragraph 27).
189. Stakeholder input into this Review indicates a general sense of satisfaction with the way in which these duties are complied with by CCP flag States. So far, no evidence that issues in this respect have been raised by the MoP or the CC, exception made of a lack of transmission of the annual national report, an issue affecting particularly one CCP which, as the Panel has been made aware, is being resolved at the time of writing. It is worth noting that the CCP compliance report (CCR)⁹⁹ allows CCPs to self-assess on the implementation of these duties, in particular their sanctioning regime, since the national report must contain a section on this issue¹⁰⁰. However, regarding the specific duty of flag States to exert effective jurisdiction over their flagged vessels or nationals, there is no evidence that an instance of non-compliance has been self-assessed, or raised, by any CCP¹⁰¹, or that the bilateral procedure established in Article 11(3)(e) of the Agreement referred to earlier has ever been used. Finally, there is no vessel flagged to a CCP currently listed in the SIOFA IUU vessel list.
190. We note in this regard that national reports submitted by CCPs are not made available to the public other than as working documents circulated prior to annual SC meetings. Even if their contents are summarised in SC Reports as far as information of relevance to the SC contained therein is concerned, we believe these should be also considered by the CC together with the CCR reports. In this respect, we also note that apart from the general requirements applicable to the information contained in the national report, the CCR template – whose structure relies on the listing of duties contained in the Agreement and in the various CMMs – does not provide for any section under which CCPs may self-assess regarding their actual response to instances where they are called to exert jurisdiction over flagged vessels or nationals in the case of violations or serious violations, whereby SIOFA has not set in motion so far any process to quantitatively assess the incidence of infringements by vessels operating in the Area.

⁹⁸ As well the submission of other due reports under the Agreement, such as the statement of implementation and compliance (See Section 2.7, below).

⁹⁹ See Section 2.5, below.

¹⁰⁰ The CCR questionnaire for self-assessment published in the SIOFA website for use by CCPs include a specific question on whether the respondent CCP has provided an annual statement of any sanctions imposed. We understand this seeks to check that the relevant information is contained in the national report.

¹⁰¹ At CC 2 2018, paragraph 19 reports an instance of a CCP flagged vessel being under investigation for fishing inside a closed area. However, the closure was based on national law and therefore the matter was considered of national competence, as no SIOFA measures were at stake.

ASSESSMENT

191. In relation to the duties of the flag State, the Panel is of the view that the provisions of the Agreement and of the various relevant CMMs adopted by the MoP incorporate and or develop in an appropriate manner the **duties of the flag State established by UNCLOS, by UNFSA and by the 1993 FAO Compliance Agreement**. Hence, the analysis carried out in this part as to the implementation of such duties will implicitly be based on these international instruments as well, also taking into account the FAO Voluntary Guidelines for Flag State Performance¹⁰².
192. It is the Panel's assessment that the CCPs have in principle discharged their duties as flag States as required. However, we must qualify this with an important caveat, given that the information allowing a robust conclusion is not available. For example, the SIOFA CMMs do not set it as mandatory that flag State CCPs submit VMS data for the purposes of compliance monitoring. It is also true that the information pertaining to follow-up to serious infringement is not sufficiently detailed for the Panel to assess actual implementation in practice¹⁰³.
193. The Panel notes that compliance with the obligation to submit an annual National Report of fishing activities by flag States has been one for which issues of non-compliance have been recurrent since the beginning, without prejudice to the fact that in recent years it only concerns a limited number of CCPs, according to the compliance assessment stemming from adopted fSCRs. The Panel welcomes recent developments at the time of writing whereby such issues seem to be properly resolved and national reports are being submitted by all CCPs concerned.
194. Finally, the Panel is of the view that a significant issue pertaining to the implementation of flag State duties in SIOFA remains unresolved, namely the fact that certain vessels operating in the Area and flagged to a CCP are not registered in the RAV. This relates to the status of the fisheries conducted in the Saya de Malha Bank, which for those CCPs with a recognised claim over the Extended Continental Shelf (ECS) in this area, are operating under the exclusive jurisdiction by virtue of their rights on the ECS, a position opposed by other CCPs. The Panel believes it urgent that a solution be found for this matter, as it concerns waters certainly comprised within the Area and resources placed under SIOFA's purview, inasmuch as the targeted stocks do not belong to species classified as sedentary. Lack of resolution here entails a significant gap in SIOFA's ability to ensure that all CCP flag States comply, as required, with all the provisions of the Agreement and those of its derived CMMs, in particular CMM 07, but also all other measures aiming at ensuring appropriate fisheries monitoring, control and compliance and the fight against IUU fishing.

Nr	Recommendation	Priority (H/M/L)
22	The Panel recommends SIOFA CCPs consider incorporating the principles of a flag State performance self-assessment into their compliance monitoring scheme, including by tasking the CC with reviewing the annual national reports submitted by CCPs and currently reviewed only by the SC.	H/M

2.2. Port State measures

195. Article 12 of the Agreement specifies that a port State Contracting Party has the right and the duty to take port State measures to promote the effectiveness of subregional, regional and global

¹⁰² <https://www.fao.org/publications/card/en/c/1905a0ab-0396-460c-aeb5-1badf6ca83ba>

¹⁰³ See Section 2.4, below.

conservation and management measures and in doing so shall not discriminate in form or in fact against the fishing vessels of any State. Additionally, it specifies that each port State Contracting Party shall: (a) in accordance with CMMs adopted by the MoP, inter alia, inspect documents, fishing gear and catch on board fishing vessels, when such vessels are voluntarily in its ports or at its offshore terminals; (b) not permit landings, transshipment, or supply services in relation to fishing vessels unless they are satisfied that fish on board the vessel have been caught in a manner consistent with the adopted CMMs; and (c) provide assistance to flag State Contracting Parties that requests it in order to ensure compliance with the provisions of this Agreement and with the CMM adopted by the Meeting of the Parties.

196. Article 12 also provides for the obligation of CCP port States to cooperate with the relevant flag State in instances where a possible violation of SIOFA rules and measures is detected. This duty consists in bringing the matter to the attention of the flag State concerned and provide it with all relevant information. Such instances must also be notified to the MoP.
197. In 2017, MoP 4 adopted a SIOFA Port State Scheme under CMM 08 (revised 2020). Its preamble makes explicit reference, among other instruments, to the FAO Agreement on Port State Measures. Paragraph 1 of CMM 08 establishes the duty of CCPs to maintain an effective system of port State control for all vessels that have been engaged in fishing in the Agreement 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 (paragraph 1).
198. However, paragraph 31 of CMM 08 limits a firm obligation to apply such a control system to the ports of CCP coastal States which have areas of national jurisdiction adjacent to the Agreement Area. With regard to CCPs other than these, paragraph 32 states that they shall endeavour to apply this CMM.
199. CMM 08 contains several operational rules regarding designated ports, advance notification by vessels requesting entry into port (including minimum standards for such notification), grounds for granting or denying entry or use of the port by the port State (these relate to possible proof of IUU activities by the requesting vessel or lack of authorisation to fish, among others), a procedure for inspections, and the role of CCP flag States in relation to these various rules and procedures whenever a vessel flying their flag is involved. At various points, activities under this scheme must be notified to the Secretariat, such as is the case of inspections. The Secretariat also receives information from CCP port States as to their designated ports, applicable deadlines for entry requests and other information other CCPs may need for their vessels to benefit from port access. CMM 08 prescribes for this information to be made available by the Secretariat on the SIOFA website¹⁰⁴. Additionally, four annexes complement the text, with templates for port entry advance requests and the reporting of port inspections results, as well as guidelines for training inspectors and inspection procedures.
200. Regarding rates of inspection, CMM 08 establishes that CCPs shall undertake inspections of all fishing vessels carrying or landing *Dissostichus* spp. which enter their ports. They must also inspect vessels flagged to another CCP on request (according to paragraph 23) or in case the access request by the flag State doesn't include all the relevant information. However, no mandatory percentage of all vessels using the port has been established as a minimum

¹⁰⁴ <https://siofa.org/mcs/designated-ports> and <https://siofa.org/mcs/port-access-denials>

requirement for inspections regarding vessels carrying or landing species under the purview of SIOFA other than toothfish.

201. With regard to the implementation of the scheme, this was discussed for the first time by CC 3 in 2019. No inspection reports had been received under CMM 8 on the previous year, except one CCP vessel inspected at a South African port. South Africa not being a SIOFA CCP, the CC advised the MoP that inspection reports submitted by non CCPs should be taken into account and that it would be beneficial for the Secretariat to prepare a meeting document for this agenda item going forward, with a summary of the port inspections carried out by CCPs (paragraph 60). MoP 6 (paragraph 31) adopted the CC report and its recommendations. Since then, “port inspections reports” has become a sticky agenda item for the CC, helping the Committee to review the implementation of CMM 08 on an annual basis. Successive CC Reports indicate CCPs port inspection reports are regularly submitted by CCPs whose ports are used to land SIOFA species. The number of inspections reported seems to be increasing, although not rapidly. In 2022, CC 6 noted a total of 34 port inspection reports submitted by 2 CCPs for 2021. As already mentioned, this concerns only CCP port States with EEZs bordering the Area. In light of geographical factors, ports to which CMM 08 rules apply, which are used for landing SIOFA species, are very limited in numbers.
202. In their input towards this Review, stakeholders are in general satisfied with the quality of the scheme set forth in CMM 08, but are more nuanced when it comes to its implementation. Although none ranked in the negative range of satisfaction, some stakeholders did mention areas where they see room for improvement, in particular timeliness and agility of procedures, communication between port and flag States, or more in general, means to ensure consistency in implementation across CCPs.

ASSESSMENT

203. The Panel recognizes and commends SIOFA for its early adoption of a scheme on port inspections, which constitutes one of the most important measures to deter, prevent and eliminate IUU fishing, monitor compliance with the relevant CMMs and collect and cross-check relevant fisheries data.
204. In general, the Panel assesses CMM 08 as compliant with the provisions of **Article 12 of the Agreement**, as well as with the relevant provisions of the **Code of Conduct for Responsible Fisheries and the PSMA**. However, we do identify a certain room for improvement inasmuch as CMM 08 does not seem to us as far-reaching as the PSMA provisions would allow it to be, resulting in a limited scope of application. In particular, we note that the implementation of the port State measures under CMM 08 is binding only for those CCPs which are coastal States with waters adjacent to the Area. Since transshipment at sea is allowed under SIOFA rules, it is possible that port inspections would be useful to ensure compliance with SIOFA CMMs even at distant ports from the Area, not just those placed under the jurisdiction of SIOFA coastal States. It would also be pertinent for CCPs to consider whether landings of SIOFA species take place in ports under the jurisdiction of non-CCPs, and enquiry that has not, to our knowledge, ever been proposed.
205. Another aspect worth considering is the fact that CMM 08 only sets a standard as to rates of inspections for toothfish among all species caught under the Agreement. As resulting from Table 4, fishing activities regarding species other than toothfish deliver the most catches in the Area, notably oilfish and alfonso. Given the urgent need for data and data verification concerning these and other species, we see port inspections as an effective means to collect and verify data. Accordingly, a standard for inspection rates for these other resources would facilitate this collect

and also set the basis for control of any conservation measures CCPs might, and in our view should, adopt in the future.

206. Additionally, the Panel agrees that to include that all potential IUU vessels to be inspected in order to prevent, deter, and eliminate IUU fishing activities and undermine CMMs adopted by the MoP in every case and not just under the request of another CCP, RFMO or CCAMLR will improve the current regime.
207. With regard to the scheme's actual **implementation**, the Panel would highlight that notified inspection reports concern almost exclusively fishing vessels carrying toothfish on board. In accordance with the information provided by the Secretariat, only two over sixty-five inspections notified over the last two years concern fishing vessels carrying species other than toothfish on board. The Panel also notes with concern that according to the documentation submitted to CC 6 in 2022 by the Secretariat, a number of inspection reports were not submitted as required by CMM 08 during 2021. This makes it difficult to conduct an assessment of compliance regarding the implementation of the scheme.

Nr	Recommendation	Priority (H/M/L)
23	The Panel recommends SIOFA CCPs consider the adoption of binding application of the Port Inspection Scheme to all ports of every CCPs, without the condition to apply to those having areas of national jurisdiction adjacent to the Agreement Area.	H/M
24	The Panel recommends SIOFA adopts at least a minimum standard regarding inspection coverage of all fishing vessels carrying or landing resources of its competence which enter their ports.	H
25	The Panel recommends SIOFA CCPs investigate possible landings or transshipments of SIOFA species at ports placed under the jurisdiction of non-CCPs, and if this is found to happen, initiate demarches with the relevant port States to request they become CCPs or cooperate with SIOFA as appropriate.	H

2.3. Monitoring, control and surveillance

208. According to Article 6(1)(h) and (i) of the Agreement, the MoP shall develop rules and procedures for the monitoring, control and surveillance of fishing activities in order to ensure compliance with conservation and management measures adopted by the Meeting of the Parties and shall also develop and monitor measures to prevent, deter and eliminate IUU fishing. The MCS rules and procedures adopted by the MoP must include, where appropriate, a system of verification incorporating vessel monitoring and observation, and rules concerning the boarding and inspection of vessels operating in the Area.
209. SIOFA deployed considerable efforts since its early stages to put in place as rapidly as possible an appropriate set of MCS measures. It has developed a broad range of tools, at a level which is significant for a young and small organisation. Already at MoP 1 CCPs concurred on the importance of such tools, stating *"The Meeting of the Parties considered strong monitoring, control and surveillance (MCS) systems to be an essential part of an effective fisheries management framework."*

210. After adopting a first set of measures in 2016, the MoP has continued to develop its MCS regulatory framework. That year, measures for Vessels without Nationality (CMM 04); the SIOFA IUU Vessel List (CMM 06); Vessel Authorisation (CMM 07) and Data Standards (CMM 02) were adopted. In 2017 the Port Inspection Scheme (CMM 08) was agreed, as well as CMMs for Control (CMM 09) and Monitoring (CMM 10). In 2018, a Compliance Monitoring Scheme (CMM 11) was adopted, followed by a CMM on High Seas Boarding and Inspection Procedures (CMM 14). All these CMMs have been amended at least once since their adoption, except for CMM 04, only subject to changes corresponding to technical editing.
211. From the input and feedback received from stakeholders, there is general consensus among them that SIOFA has adopted adequate MCS measures, with a clear exception, regarding the lack of a regional VMS. Stakeholders also tend to agree that these measures are adequately implemented, with only one respondent expressing some dissatisfaction in this respect.
212. The standards for the data collection, reporting, verification and exchange related to fishing activities by SIOFA's CCPs flagged vessels in the Area of SIOFA are set in **CMM 02 on Data Standards**, which includes among others, CCP duties to collect and submit catch and effort data, scientific observer data¹⁰⁵, as well as CCP duties regarding data verification, the use of agreed formats for data submissions. A list of annexes contains the relevant templates and forms. The SIOFA website maintains a dedicated page with templates for the collection and submission of data for use by CCPs.
213. Data verification by CCPs may be carried out through systems or mechanism allowing cross-checking with, among others, data collected from VMS, independent monitoring, vessel trips, landing and transshipment reports and port samplings.
214. According to the successive final SIOFA Compliance Report (fSCRs)¹⁰⁶ adopted by the MoP, most of the issues of non-compliance with the data standards relate to lack of, or late submission, or to data submitted without using the relevant format. This results in difficulties for the Secretariat to assess the relevant data, especially when not submitted within the established deadlines.
215. **CMM 07 on Vessel Authorisation** sets up the obligation for the MoP to establish a SIOFA Record of Authorised Vessels (RAV) for fishing authorised to fish in the Area. The SIOFA RAV is to be maintained by the Secretariat and a summary thereof is publicly accessible on the website¹⁰⁷. In case of non-compliance with these requirements, a vessel is not authorised to fish for, retain on board, tranship, or land fishery resources harvested in the Area.
216. For a vessel to be incorporated in the RAV, mandatory vessel information requirements are prescribed in paragraph 2 of CMM 07 and the Secretariat must notify the flag State within 2 days from submission of any missing information. The flag State CCP must then promptly complete the required information or provide the necessary explanation. CMM 07 does not detail what follow-up applies to any explanation provided. In 2022, MoP 9 tasked the Secretariat to verify if every vessel entry on the RAV contains all the information required and in case of missing information, inform the relevant flag State CCPs of this situation by April 30, 2023 at the latest. The vessel will in the meantime be marked as "incomplete" and removed from the RAV unless the information is duly completed by 30 June 2023. We note the Secretariat has been able to

¹⁰⁵ See also Section 1.3, above.

¹⁰⁶ See Section 2.5, below.

¹⁰⁷ The vessel record on the SIOFA website is presented in accordance with the confidentiality provisions contained in CMM 03.

adopt a proactive approach to conduct checks and RAV management, supported by the recruitment of a Compliance Officer in 2023.

217. CMM 07 contains in paragraph 6 the obligations of CCPs to authorise vessels to operate in the Area only if a number of conditions are fulfilled. These cover both their own capacity to discharge their duties as flag States, the lack of a history of IUU activities for the vessel, and the jurisdiction of the relevant CCP over the owners and operators of the vessels. CCPs are also required to notify the Secretariat of any suspicion of activities by the vessels in contravention of the SIOFA rules on authorisation and registry in the RAV.
218. **CMM 06 on the SIOFA IUU Vessel List**, establishes the procedure to identify and establish a list of vessels which have engaged in fishing in the Area in contravention of SIOFA CMMs. The measure in general contemplates procedures for the development of a Draft IUU List, including requirements on deadlines, information to be provided and notification to the flag State; for the adoption of a Provisional and Final IUU List as well as the review of the current IUU Vessel List. In addition, it contemplates cross-listing IUU vessels listed by CCAMLR, CCSBST, ICCAT, IOTC, IATTC, GFCM, NAFO, NEAFC, NPFC, SEAFO, SPRFMO and WCPFC and a reporting template on vessels alleged to be involved in such activities.
219. In 2018 MoP 5 adopted an IUU List for the first time¹⁰⁸ with two vessels. Currently, the IUU Vessel List is separated in two parts, the first contains the SIOFA IUU List and the second part, the list of Cross-listed IUU vessels.
220. From various passages in annual MoP reports, the Panel notes 2 issues of interpretation which impinge on the implementation of the procedure to list IUU vessels, all of which remain so far unresolved. First, whether or not the information provided to support the inclusion of a vessel on the Draft IUU List can be considered appropriate when it is provided by an NGO (even if it is confirmed by the relevant flag State). Second, the need to register in the RAV vessels flagged to a CCP which conduct their activity in the area of the Saya de Malha Bank, when the CCP concerned claims exclusive jurisdiction over that area based in the UNCLOS provisions on the rights of Coastal States over the Continental Shelf, in this case an extended Continental Shelf. Other CPPs disagree with these claims and consider the activities conducted in Saya de Malha Bank as falling under the purview of SIOFA.
221. In some cases, vessels listed in the Provisional or Draft IUU lists have failed to gain consensus for their inclusion in the Final IUU List¹⁰⁹. As a compromise, CCPs have tended to agree their inclusion in the Draft IUU List for rediscussing the following year, instead of taking a decision to remove them from the Provisional List or include them in the Final IUU list. This compromise approach seems to have become a regular practice.
222. **CMM 04 on Vessels without Nationality** complements the previous measures. It recognizes that the activities in the Area carried out by such vessels undermine the efforts of the CCPs to ensure the long-term sustainability of the fishery resources, and thereby the objectives of the Agreement. These vessels are considered as engaged in IUU fishing. CCPs are consequently under an obligation to report to the Secretariat any sightings of fishing vessels that are suspected of, or confirmed as being, without nationality that may be fishing in the Area. This information is to be

¹⁰⁸ <https://siofa.org/sites/default/files/SIOFA-IUU-Vessels-List-2023-01-05.pdf> (updated 05 January 2023 at the time of preparation of this Report).

¹⁰⁹ In some of these cases, CCP-flagged vessels have been proposed for inclusion in the IUU list on account of fishing activities in the Area without being duly registered in the RAV. However, CCPs have been unable to reach consensus to list vessels in these cases.

circulated among CCPs, with the Secretariat being required to provide a report on these matters as a standing agenda item for CC.

223. Such reports have only been submitted to the CC 3 in 2019. The CC determined that these vessels did have a nationality and some were in the Area under the purview of the IOTC. However, for two other vessels there was no validated information on whether or not their activities were under the same purview, even though they were listed in the IOTC vessel registry. The Secretariat was tasked to contact the flag State and gather information. No follow up action was recorded on CC reports in the following years.
224. The low numbers of reports on sightings of vessels, whether suspected of having no nationality or of engaging in fishing without the required SIOFA authorisation, could be understood as a good sign about the limited occurrence of IUU activities in the Area, but it is also an uncertain conclusion considering that it could also be due to the small size of the fleets operating under SIOFA's purview¹¹⁰.
225. The adoption of an **HSBI scheme under CMM 14** in 2019 followed a number of years' work and debate among CCPs. The aim of this measure is to regulate high seas boarding and inspection of fishing vessels in the Area with the purpose of controlling compliance with the Agreement and the CMMs in force.
226. CMM 14 contains a range of provisions covering different elements needed for its implementation, including among others: a record of authorised inspection vessels; CCP contact points; notifications; restriction on the use of force and carriage and use of arms; inspection reports; serious violations and annual reports on inspections undertaken. It has three annexes, respectively containing the report form, the SIOFA inspection flag and the boarding questionnaire, which can be found in different languages on the SIOFA website.
227. IN 2022, three HSBI procedures were reported by one CCP. The CC noted the importance of undertaking HSBI and the contribution this makes to SIOFA's MCS system.
228. Notwithstanding the above, CCPs are not always in agreement regarding the interpretation of the scope and applicability of CMM 14, this being an obstacle for its implementation. Some CCPs believe the HSBI scheme should cover all fishing vessels operating in the Area, while others believe fishing vessels targeting tuna and tuna-like species under the purview of another RFMO should be excluded. This situation was highlighted by various stakeholders who provided input to the Panel for this Review.
229. **CMM 10 on Monitoring** contains provisions (paragraphs 4 to 13) related to the obligation of flag State CCPs to ensure all their vessels authorised to fish in the Area are fitted with a Vessel Monitoring System (VMS), which must be operational at all times while in the Area. The vessel's automatic location communication (ALC) unit must report back to the competent authority in the flag State every two hours, except for those cases when other reporting periods have been established. CMM 10 also provides for rules to apply in case of technical failure or non-operational ALC, with a requirement that the devices be tamper-resistant. CCPs are also under obligation to develop, implement and improve their systems to register the VMS data transmitted by their vessels, which could serve to document their activity or validate their position. Paragraph 11 of CMM 10 only states that Each flag CCP shall ensure that any VMS reports and messages transmitted to the Secretariat shall be in accordance with the data exchange format of CMM 2022/02 Annex C. There is no other provision mentioning the

¹¹⁰ See Section 1.6, above.

submission of VMS data to the Secretariat. Until 2019, CMM 01 foresaw such an obligation in paragraph 44, but made it contingent on the adoption of a specific VMS CMM. This measure was eventually deleted, since no such CMM had been adopted and CCPs interpreted the provision as voluntary¹¹¹. The absence of an obligation to submit such data can also be confirmed by the SIOFA Reporting and Submission Requirements Summary checklist of obligations, prepared by the Secretariat on its web page¹¹². From available information, it would appear that CCPs do not provide VMS data to the Secretariat on a voluntary basis.

230. For several years, discussions have taken place within the MoP and CC, including through ongoing intersessional work, to advance in the development of a SIOFA regional VMS, without success thus far mostly due to CCPs expressing a wish for further appraisal of its technical and budgetary requirements. Stakeholders, however, are generally in agreement that the establishment of a SIOFA VMS is one of the short and medium-term challenges that SIOFA will need to address sooner rather than later. One stakeholder went as far as pointing out that the greatest weakness in the SIOFA MCS framework is the absence of a SIOFA regional VMS.
231. CMM 10 also makes it a CCPs obligation to secure appropriate information on fishing activities, including through an electronic logbook or bound fishing logbook. Entry-exit reports are also required. CCPs must ensure their competent authorities receive this information from the vessel within 30 days of the completion of the fishing trip and that the quantities of catch recorded correspond to those kept on board. Data submitted to the Secretariat from these sources must comply with the data standards in CMM 02. Regarding the entry-exit reports, the competent authority must notify the Secretariat of a vessel entry or exit into the Area within a period of 24 hours, by email or other means and according to the format in Annex I of CMM 10.
232. The CC regularly reviews entry-exit reports based on information prepared by the Secretariat. The Secretariat's report has on occasion noted instances of anomalies in the review of data submitted by CCPs, late reports (after 24 hours) and technical problems with the service providers.
233. Additionally, CMM 10 establishes an interim regime regarding the monitoring of transshipment and other transfer operations at sea. Transshipment is defined by the Agreement in Art. 1 (I) as *...the uploading of all or any of the fishery resources on board a fishing vessel onto another vessel whether at sea or in port*. On the other hand, from paragraph 17 of CMM 10 it can be understood that a transfer concerns operations such as transfer of fuel, crew, gears, and any other supplies. We note that the definition in the Agreement of transshipment only includes the offloading/uploading of fishery resources and does not mention fishery products derived from fishery resources, which does not preclude the MoP to complement the relevant measure in this regard, pursuant to Article 6 of the Agreement.
234. Two differences were identified in the management for the 2 types of activities. First, for transshipments at sea, both unloading and receiver vessels must be registered in the SIOFA RAV, which does not apply in respect to other transfer operations at sea. Notwithstanding, whenever both vessels involved in a transfer operation at sea have been involved or intended to be involved

¹¹¹ Paragraph 44 of CMM 2019/01 read: *Each CCP shall, in respect of each vessel flying its flag which participates in bottom fishing in the Agreement Area, submit VMS reports in an electronic format to the Secretariat in accordance with any VMS CMM and data standards CMM adopted by the Meeting of the Parties.*

¹¹²

<https://siofa.org/sites/default/files/files/SIOFA%20Reporting%20and%20Submissions%20requirements%20%282023%20Updated%29-rev1.pdf>

in fisheries activities in the Area, the rule does apply. Secondly, whereas for any transshipment at sea an observer is required at least in one of the vessels involved, this is not required for transfers.

235. The interim regime for transshipment and transfers at sea specifies a number of requirements such as prior notifications to competent authorities including the information to be provided, according to Annexes II and V, reporting by observers using the Annex III Transshipment Log sheet, and notification of all the operational details to competent authorities, according to Annexes IV (Transshipment Declaration) and VI (Transfer Declaration). CCPs must submit log sheets, declarations and notifications¹¹³ to the Secretariat, which will make them available on the restricted section of the SIOFA website as soon as possible. CCPs must also take appropriate measures to verify the accuracy of the information received according to these provisions and provide the relevant information on transshipment and at sea transfers to the Secretariat on an annual basis for consideration by the CC.
236. CMM 10 also contains provisions for the monitoring of transshipments at port (paragraphs 20-25) which is only allowed under prior authorisation by both the competent authority of the flag State of vessel and of the port State. A vessel intending to carry out a transshipment in port is required to notify the port State at least 24 hours in advance. However, it is only required to notify the flag State of the receiving vessel only if the flag State in question is known.
237. The general MCS framework in place under SIOFA is completed by the provisions of **CMM 09 on Control**. This CMM creates a discipline for the conduct of fishing operations through the use of several tools and components. A network of CCP control contact points is set up, as well as vessel requirements for on-board documentation and markings, the marking of fixed gear, vessel obligations regarding the retrieval of lost, abandoned or otherwise discarded fishing gear, a prohibition of the discharge of plastic¹¹⁴, the labelling of frozen products of fishery resources, a scientific observer programme, rules regarding sightings and identification of non-Contracting Party, non-CCPs and PFE vessels, and a summary of reporting obligations.
238. Regarding the **SIOFA observer programme**, paragraph 11 of CMM 09 merely states that, without prejudice to other requirements in specific CMMs, each *Contracting Party, CNCP and PFE shall ensure that the scientific observers carried by vessels flying its flag operating in the Agreement Area are qualified and authorised to perform their tasks and record any requested data*. No provision is found in this CMM regarding the standards applicable in order to consider an observer as qualified, which means CCP national standards should apply. The data is to be collected by CCPs for all observed trips and reported to the Secretariat by 31 March of each year for the previous calendar year, in accordance with Annex B of CMM 02 "Observer Data".
239. Specific rules and levels of observer coverage can be found in CMM 15 on the Management of Demersal Stocks (25% of hauls observed as a target requirement) and in CMM 01 on Bottom Fishing. The latter, among others, defines an electronic observer programme as a program that uses electronic monitoring equipment in place of, or in conjunction with, a human observer or human observers on board a vessel which is capable of generating, storing and transmitting data to competent authorities. CCPs are allowed to use this tool whether or not in combination with human observers and/or port samplings, provided that the SC has developed a set of guidelines for the evaluation of this type of program and made relevant recommendations to the MoP in this regard (CMM 01 paragraph 42), a task entrusted to the SC with a target for completion by 2020 (paragraph 5). Additionally, there are rules concerning the use and release of observer data.

¹¹³ Without delay for notifications, 15 days at the latest for observer reports after the observer's disembarkment.

¹¹⁴ See also Section 1.5.7, above, for the two latter elements.

CMM 02 on data standards provides that the information on CCPs' annual observer programme implementation must be submitted to the Scientific Committee as part of the annual national report. Finally, CMM 03 on Data Confidentiality (paragraph 2), provides for the release of observer data as public domain data, but also as confidential data for use exclusively by the SC and its working groups when the data is collected at a finer level of stratification¹¹⁵. The safeguards established by CMM 03 apply in full to such observer data.

240. The SC was tasked to develop and adopt a template for observer reports by 2023, as well as a template for observer data collection for future use. Additionally, a SIOFA framework for scientific observation clarifying all the aspects related to scientific observation shall be developed by 2023 the MoP. SC 8 did discuss the basis for developing a SIOFA framework, including a work plan and a *first draft proposal for a new CMM for regulation of scientific observer harmonisation in SIOFA* (paragraph 308). SC 8 did not produce the requested templates at this time.

ASSESSMENT

241. As it was mentioned in Section 1.5.1 above, SIOFA's regulatory activity history reflects well the needs of a small and young organisation, where the MoP has focused on developing a control and enforcement framework first, and measures adopted since SIOFA's inception are highlighted as a great achievement by stakeholders. It is the Panel's assessment that SIOFA has developed an important and impressive number of MCS measures for its age, including in particular the one establishing High Seas Boarding and Inspection Procedures.
242. Notwithstanding, the Panel also recognizes that the absence, among the list of such measures, of a SIOFA VMS is a significant gap which would be necessary to fill as soon as practicable, especially considering that, although all CCPs conducting fishing in the Area are operating VMS at flag level, there is still no mandatory requirement under the SIOFA CMMs to submit VMS data for the purposes of, at least, verification purposes.
243. The Panel has identified some improvements CCPs could consider regarding substantive and procedural aspects of the current measures¹¹⁶ as well as regarding their implementation, which in most cases is still under exclusive national purview rather than under an agreed regional approach. Implementation requires effective verification mechanisms that SIOFA should reinforce, for instance VMS, observer programmes and complete, accurate and timely submission by CCPs of information required by relevant CMMs. Another important aspect of implementation is the need for a shared interpretation of the rules among the different CCPs through the avoidance of ambiguity in the text of the CMMs. In this regard, the Panel has noted differences on interpretation between the CCPs and between those and the Secretariat, the latter in particular respect of the CMS¹¹⁷. These differences have affected the implementation of some CMMs, including, among others, those dealing with the process to list IUU vessels, the HSBI rules and the RAV.
244. With regard to CMM 06 on the IUU vessel list, the procedure followed by the MoP to determine whether or not a vessel should be included in the Final IUU List is different from what is established by the letter of the measure. As we have described earlier, due to a lack of consensus among CCPs about whether the conditions are met for de-listing a vessel, a practice has developed to include the vessel in question in the Draft IUU list for rediscussion the following year. This practice suggests a need for CCPs to find agreement to clarify the provisions of CMM 06

¹¹⁵ See also Section 1.3, above.

¹¹⁶ Those regarding CMM 08 were covered in the previous Section.

¹¹⁷ See Section 2.5, below.

or else agree on their interpretation, lest the status of potential IUU vessels remains unresolved. The matter of what information can be used for the purposes of this procedure is also in need of clarification, and the Panel is of the view that it is not the origin, whether a public authority or an NGO, but the nature and verifiability of the information that should prevail when dealing with deciding action against alleged IUU activities by a vessel, lest the efficacy of the process is significantly impaired.

245. There are other discrepancies on interpretation between the CCPs that were identified that need to be solved for SIOFA to advance in the implementation of the relevant measures, in particular and in addition the one just discussed in relation to CMM 06, those related to CMM 07 which were discussed in Section 2.1, above, and on the scope of CMM 14 on the vessels to which the HSBI scheme applies.
246. Regarding scientific observation, the Panel notes the dispersion of rules as compared with overall observer programmes in other RFMOs, particularly between CMMs 01, 02, 03, 06 and 15. The regulation of this important element of SIOFA's conservation and management framework is therefore not quite systematically dealt with in the various CMMs and efforts towards a more systematic and structured observer programme would be a good step forward.

Nr	Recommendation	Priority (H/M/L)
26	The Panel recommends and encourages SIOFA CCPs to continue their efforts to agree on a SIOFA VMS in order to verify vessels activity in the Agreement Area. The Panel also recommends that CCPs adopt rules for the submission VMS data until such scheme is adopted.	H/M
27	The Panel recommends SIOFA CCPs urgently seek to clarify the various issues of interpretation affecting the implementation of several MCS measures, in particular those related to CMM 06 on the IUU vessel list, CMM 07 on Vessel authorisation and CMM 14 on the HSBI procedures, including by seeking independent legal or technical advice if necessary.	H
--	With regard to SIOFA's observer programme, and in general with regard to possible technical improvements for the standing measures, Recommendation nr 9 on a corpus of SIOFA CMMs applies also for the purposes of the issues assessed under this criterion	--

2.4. Follow-up on infringements

247. Regarding CCP and flag State duties as to their follow-up to infringements by their vessels, we have touched on this already in previous Sections discussing flag State duties, and are also of relevance with regard to other Sections further down, namely on the procedures linked to the establishment of the SIOFA IUU List and the SIOFA Compliance Monitoring Scheme (CMS). The precise obligation for CCPs to report to the MoP via the implementation report on action taken in respect of any violation stems from Article 10(2) of the Agreement.
248. Concerning the flag State's responsibility to follow-up on infringements committed by its flagged vessels, it is not always clear whether CCPs have investigated or taken proper action in respect of such infringements, in particular due to lack of implementation of certain reporting requirements by CCPs.

249. A review of the 4 fSCR produced by the CC and adopted by the MoP since 2019¹¹⁸ shows a trend in many of the cases to not record the remedy or action taken under CCPs' national sanctioning regimes in response to infringements. CCP discussions, as reported, provide in many cases very limited information about investigations carried out into alleged violations or infringements to different obligations under the CMMs by their vessels or their nationals, on which to build an appropriate assessment. However, the MoP has clarified in some cases the mandatory nature of the submission of reports and the consequences of inaction for the CCPs concerned even when the latter were not present at the meetings.
250. Stakeholder input into this Review as to the extent to which SIOFA and its CCPs follow up on non-compliance with CMMs suggests respondents generally believe CCPs are willing to improve implementation and compliance and the causes for non-compliance are reviewed in the SIOFA CMS discussed in Section 2.5 below. Stakeholders also note the recruitment of a Compliance Officer for the Secretariat will improve the ability of the organisation to monitor and assess performance of CCPs with regard to follow-up actions on infringements.

ASSESSMENT

251. The Panel is not able to assess with sufficient certainty the extent to which SIOFA CCPs provide appropriate follow-up to infringements. There is a procedure in place, discussed in the next section, to monitor compliance, which comprises steps to verify any required follow-up. However, the relevant reports documenting this process often provide incomplete or insufficient information. Since the latter must be provided by CCPs reporting, we can only observe that such reporting requirements not always are duly complied with, either in terms of completeness or in some cases possibly timeliness. There are only a few instances where follow-up on infringements was touched upon at the relevant SIOFA meetings, for instance in cases related to IUU fishing activities of vessels operating in Saya the Malha Bank. However, the reports of these discussions do not allow us to discern whether concrete follow-up was ensured to any alleged or proven violations of SIOFA measures.
252. Assessing the action taken by a State on vessels or persons that have infringed applicable rules is dealt with in SIOFA alongside the assessment of action taken by the CCPs to implement SIOFA obligations into their respective legal orders, and also on the delivery of CCPs on duties that correspond to them, their authorities or administrations, rather than their nationals. The latter case is generally focused on CCP's delivery on their reporting requirements. The nature of the peer review that has to take place to assess CCPs' performance in these different fronts is, however, significantly different. CCP representatives at SIOFA processes do not always have the power to determine the outcome of a prosecution procedure in respect of nationals who infringe the rules. Although they can be asked to report on whether their administration initiated the relevant infringement procedures, sanctions may ultimately depend on a decision taken by a different administration within their national systems. This often entails that CCP representatives do not feel they are ultimately responsible for ensuring follow-up. In contrast, they are indeed in such a position when it comes to compliance at the State level for the implementation of SIOFA measures in domestic law or to their reporting requirements. It is an issue that affects not just SIOFA but any international body, where the specific element of sanctioning procedures is dealt with under a general umbrella of compliance. It is our assessment that follow-up on infringements must be identified specifically for its particular nature, as just described, and that dealing with this area together with other elements of compliance for which the responsibility of

¹¹⁸ CMM 11 on a Compliance Monitoring Scheme was adopted in 2018. It is discussed in detail in the next Section 2.5.

the administration represented at SIOFA processes is more precisely defined leads to follow-up on infringements being poorly ensured as poorly reviewed and assessed.

253. The Panel notes, however, that this issue is recognised by CCPs, who are taking action to improve the compliance reporting procedures through discussions planned for the intersessional period ahead of MoP 10 in July 2023. At the time of writing, a revised CCR template has been developed and a new proposed draft CCR template has been circulated by the Secretariat to CCPs to prepare the MoP discussions. The Panel welcomes these discussions and would hope the revised template allows a more robust scrutiny of follow-up action taken by CCPs against violations, since it is our assessment that, so far, there is no true follow-up reported by CCPs to the SIOFA relevant bodies regarding actions taken by them to remedy and sanction violations, or that such follow-up is minimal. In some cases, no action to be taken is even recorded in the fSCR, which is not quite in line with paragraph 5 of CMM 11, according to which the CC and the MoP are to review previous years' fSCR recommendation, including follow-up actions. Whether this could be seen as an understanding that no action was required or, on the contrary, that the relevant CCP has fallen short of its obligations to take such action is not clear from the SIOFA documentation on these peer review processes.
254. It is therefore the Panel's view that this situation needs to be addressed as a matter of priority to improve implementation and compliance and in order to ensure prompt response to violations which undermine the effectiveness of SIOFA's CMMs and ultimately the objective of the Agreement. Given the close linkages between the issues discussed here and those pertaining to SIOFA's CMS procedures, recommendations in the next Section where the CMS process is discussed and assessed are also intended to improve SIOFA's performance regarding follow-up of infringements and should be seen as complementary to the one we issue below.

Nr	Recommendation	Priority (H/M/L)
28	The Panel recommends including in the agenda of the Compliance Committee a specific standing item on follow-up actions in the framework of the CMS for the previous year or years.	H

2.5. Cooperative mechanisms to detect and deter non-compliance

255. The duties of Contracting parties are laid down in Article 10 of the Agreement. These duties include implementing in their national legal order the Agreement provisions and all measures adopted under it, collecting and submitting all required data, taking action in respect of infringements by their vessels and exerting jurisdiction in respect of their nationals. CCPs must cooperate among themselves to ensure the effective discharge of these duties. Compliance, against this background, relates to the mechanisms SIOFA has put in place for all CCPs to facilitate this cooperation so that all CCPs contribute equally and collectively to the attainment of SIOFA's objectives by delivering on their commitments under the Agreement.
256. The establishment of a Compliance Committee (CC) under Article 7 of the Agreement assigns the task to this subsidiary body of the MoP of verifying the implementation of and compliance with measures adopted in accordance with Article 6. Its ToRs were adopted at the extraordinary MoP held in 2015. MoP 3 agreed to convene the first session of the CC prior to MoP 4 in 2017.
257. The following year, CCPs adopted CMM 11 (revised 2020) on a Compliance Monitoring Scheme. With this measure, the MoP sought not only to shape the compliance assessment process and actions to remedy or prevent non-compliance, but also to standardise the reporting by CCPs on

their implementation duties through a cooperative mechanism based on CCPs' consensus. Paragraph 26 of CMM 11 states in this respect that (...) *CCPs commit themselves to the cooperative and equitable resolution of any issues which may arise under this CMM.*

258. CMM 11 creates a peer-review process in several stages which can lead to the identification of possible cases of non-compliance by CCPs, as well as action taken by CCPs in respect of verified cases of non-compliance. The CMM covers the process' objectives, status assignment (compliant, non-compliant, critically non-compliant) and gradual responses according to the type, severity degree and causes of non-compliance, as well as the review of follow-up to any recommendation by the MoP in previous years. The results of this process materialise in a Compliance Report, to be adopted at each annual session by the MoP, after going through successive stages of preparation. These start with the submission of individual CCP Compliance Reports (CCR) based on self-assessment¹¹⁹. They are compiled by the Secretariat into a collective draft SIOFA Compliance Report (dSCR) which is circulated to CCPs and considered by the CC, which must agree by consensus on a provisional SIOFA Compliance Report (pSCR) for submission to the MoP. The latter adopts a final SIOFA Compliance Report, (fSCR). At all stages of its development until the adoption of the fSCR, the report document is classed as restricted, in accordance with paragraph 23(a) of CMM 11. The fSCR is made publicly available as an annex to the relevant MoP report, the SIOFA website having no specific webpage dedicated to presenting the fSCRs adopted over successive years.
259. Annexes I, II and III of CMM 11 provide guidance to CCPs and the Secretariat as to how to carry out the procedure. Annex II and III establish the templates for the pSCR and fSCR. Annex I establishes the status categories and the criteria determining the assignment of status as well as the corresponding action/response to be taken as a remedy for the non-compliance or to avoid it in the future.
260. Since the adoption of CMM 11, as already noted in previous sections, 4 compliance assessments have been completed. As can be expected from the nature of the matters at stake, this has not always been an easy task. Dissenting views and interpretations of the rules governing this procedure have arisen among CCPs and this is evident both from meeting reports and from the input received from stakeholders into this Review Process.
261. The various fSCRs adopted so far hint at a number of obstacles and difficulties to implement the scheme effectively, and their causes may be summarised as follows: i) failure to submit, or to submit in a timely manner, CCP implementation reports, annual reports on fishing activities and data required under relevant CMMs due to lack of capacity of some CCPs or even lack of political will; ii) limited Secretariat capacity to fulfil its tasks related to the procedure, due not just to limited human resources, but also to limited expertise on compliance matters, despite their acknowledged efforts and commitment to the job; iii) difficulties to reach consensus on the interpretation on some of the identified issues of compliance and their causes, which sometimes do not allow CCPs to agree on appropriate remedies for such actions. One such issue worth noting relates to how overlapping obligations for vessels arising from both SIOFA and neighbouring RFMOs, in particular IOTC, render a particular vessel activity compliant with – or else contrary to – SIOFA measures. This issue is generally considered by CCPs and stakeholders one of the challenges SIOFA has had to face in the past and will have to face in the short to medium term.

¹¹⁹ A questionnaire/template for CCR submissions is published in the SIOFA website for use by CCPs each year, downloadable from this page: <https://siofa.org/compliance/cms>

262. When CCPs demonstrate lack of interest, in terms of their commitment to invest time, proactiveness in participation, inability to reach agreement as to the interpretation of various CMM provisions, this is indicative of insufficient political will to make the scheme effective, an element naturally difficult to address. However, peer review mechanisms are meant to allow channelling a collective positive pressure towards a stronger engagement by all CCPs.
263. As to capacity-related issues, they are often recognized as an obstacle to compliance with applicable reporting obligations. The current form/template for the CCPs Compliance Report (CCR) is seen by some as overly burdensome, requiring revision and simplification as soon as possible. CC 6 in 2022 discussed the update of the template (paragraphs 28-30) in recognition of the limitations of the current system. It requested that a new template be developed by the Secretariat during the intersessional period for use in the 2023 Compliance Report and offered suggestions to guide such work. The new template should provide simplification and improved ease of use while maintaining the current level of rigour, including by removing questions concerning historical obligations that have already been satisfied, allowing certain information to be presented as tables, rather than multiple questions and answers and including an option for 'not applicable' in responses. The CC stated that the templates used by other RFMOs should be used as reference. It also stated that the capacity of the Secretariat could be increased through the recruitment of a Compliance Officer or a short-term consultancy. The new template should make it very clear which year's information is being requested. CCPs' self-assessments should be supported by clear statements of implementation and, where relevant, by appropriate evidence or documentation. The Secretariat's work on this has been attributed as a priority task for the new Compliance Officer, who took office on February 1, 2023. At the time of writing, and as already noted in the previous Section 2.4, a revised template has been developed during the 2022-2023 intersessional period and is being considered for circulation to CCPs by the CC Chairperson.
264. The 2020 fSCR endorsed a specific proposal to provide assistance by the Secretariat to CCPs experiencing capacity issues regarding data reporting. The 2021 fSCR mentioned a specific proposal for addressing capacity issues on tables 1 to 14, but our research has been unable to ascertain what follow up has been given to this proposal. There are also issues of language barriers. In 2019, CC 3 recommended that the CCR be translated into French, which MoP 6 endorsed. Although a systematic translation was not renewed in 2022, the French version is provided on request to French-speaking countries by the Secretariat.
265. The most common issues regarding the performance of the Secretariat in support of the CMS, as resulting from meeting reports and the input received from stakeholders, relate to 3 different areas. First, the Secretariat's analysis and verification of the data collected is relatively limited, although it is recognized that beyond any question of limited resources, this is also a consequence of CCP submission failures as well as the limited functionality of the data verification mechanisms available. Second, issues of interpretation of CMM 11, particularly with regard to the assignment of a provisional compliance status. A status assignment is mandatory for the Secretariat under paragraph 18 of CMM 11. However, we note the use in fSCRs of "not assessed" or "N/A" status for some entries. These assignments, which deviate from the status categories contemplated in CMM 11, are used in cases where the relevant information has not been provided by the CCP concerned. Third, possibly also linked to matters of unclear

interpretation, views are sometimes expressed that the Secretariat has not been consistent in the application of the standards in similar cases¹²⁰.

266. From the latest fSCR, adopted by MoP 9 in 2022 the CMS process results are summarised in the table below. Each year, the evolution of instances of non-compliance identified in previous fSCRs are reviewed and reassessed as applicable. These results point at CMM 02 on data standards as the measure CCPs find it hardest to comply with, and to CMM 09 on control as the measure for which compliance issues have been the most successfully resolved.

Table 5: *Compliance status assignments and instances of follow-up action in the 2022 Final SIOFA Compliance Report in Annex I of MoP 9 Report.*

Assessed implementation obligations	Compliant	Non-compliant	Critically non-compliant	Not assessed or N/A	Follow-up indicated
SIOFA Agreement	2	-	2	-	-
CMM 01 – Bottom fishing	2	-	-	2	-
CMM 02 – Data Standards	2	-	5	4	2
CMM 06 – IUU listing	1	-	1	-	-
CMM 07 – Vessel authorisation	-	-	-	1	-
CMM 08 – Port inspection	2	1	-	-	2
CMM 09 - Control	4	1	-	1	3
CMM 10 - Monitoring	2	1	2	-	3
CMM 11 - CMS	-	-	1	-	-
CMM 12 - Sharks	-	-	-	1	1
CMM 14 – HS Boarding and inspection	1	-	1	1	3

267. In closing our analysis of the SIOFA Compliance processes, the Panel notes that although stakeholders' input to this Review reflects a positive response to the introduction of the CMS, views remain quite divided when it comes to the manner and effectiveness of its implementation in practice. The process itself is seen as necessary and useful, but the burden of notification requirements attached to it and the need to find agreement as to how to assess compliance and assign the appropriate status remain a concern among stakeholders.

ASSESSMENT

268. It is the Panel's assessment that **SIOFA has established adequate cooperative mechanisms** to monitor compliance, detect and deter non-compliance, and remedy compliance issues. In this regard, the Panel recognizes that SIOFA has endowed itself with the necessary tools to meet with this vital function to fulfil its objective through, among others, the peer review processes implemented by the Compliance Committee, cooperation with international organisations, the adoption of different CCMs which contribute to that end, for instance CMM 06, on the IUU Vessel List, including the cross-listing of IUU vessels listed by other RFMOs, CMM 07, on Port Inspection, CMM 14, on the HSBI procedures and, most importantly, CMM 11, establishing the Compliance Monitoring Scheme.

¹²⁰ See Final Report CC 5,

<https://siofa.org/sites/default/files/documents/meetings/Final%20report%20of%20the%20CC5%20without%20annexes.pdf>

269. The Panel indeed commends SIOFA for the establishment of a Compliance Monitoring Scheme which represents a milestone for this RFMO, in ensuring implementation of and compliance with their obligations by the CCPs and providing a comprehensive mechanism to that end. We believe CMM 11 is a robust measure with the necessary elements to follow a well-directed process to assess compliance. However, the actual implementation of the rules conforming the scheme needs improvements.
270. In this regard, the template for reporting their self-assessment of compliance and implementation by the CCPs (CCR), the starting step in the annual process to adopt a final Compliance Report by the MoP, will in our view benefit from revision. This instrument is today burdensome and, in some cases, does not really request CCPs with sufficient clarity or precision their delivery of information allowing appropriate verification of compliance. As we discussed in Section 2.4, above, the template does not contain any section under which CCPs may self-assess regarding their actual response to instances where they are called to exert jurisdiction over flagged vessels or nationals in the case of violations or serious violations, whereby SIOFA has not set in motion so far any process to quantitatively assess the incidence of infringements by vessels operating in the Area. While reaffirming our assessment that the mechanism, in itself, is quite adequate, its implementation via the template can be improved by filling this gap, and the Panel notes that MoP 9 decided in 2022 meeting to undertake a revision, with clear guidance for prioritisation. At the time of writing, this revision is underway.
271. It could also be beneficial for SIOFA to explore other RFMOs practices regarding the assessment of cases of possible non-compliance status due to late submission of required reports or data. Such cases have so far taken a significant part of the CC sessions, representing a cost in time and efficiency. In particular, we have noted lengthy discussion about what the appropriate compliance status should be for a CCP that has submitted the required report or information (compliant) but not within the established deadline (not compliant), leading to the assignment of two opposing status for the same issue. In other RFMOs, such as SPRFMO, for instance, the Compliance and Technical Committee Chairperson is tasked with the assistance of the Secretariat to assign a status of “non-compliant” and “no further action” for cases where a reporting deadline or timeframe had not been met, but the obligation has been met before the circulation of the Draft Compliance Report and is not a repeated case of non-compliance¹²¹.
272. Regarding the second sub-criterion under this Criterion, it is the Panel’s assessment that there is room for improvement regarding the **effectiveness with which the CMS is used by SIOFA**. First, the Panel notes that the scheme is based almost entirely on self-assessments provided by the CCPs and that repeated cases of failure to submit implementation reports, annual reports on fishing activities or data according to the different CMMs remain as standing issues of non-compliance by some CCPs. Second, the role and contribution to the process by the Secretariat needs to be addressed and reinforced, especially regarding the assessment of data and interpretation of the procedural rules at stake. Third, the Panel also considers the lack of completion or strict adherence to the procedure as major shortcoming. For example, observed instances of no, or erroneous, status assignment, lack of remedy or its inconsistent determination under the presently applicable criteria, or absence, or not recorded, follow-up action. Regarding the latter point, an annual follow-up action assessment for any remedies identified in previous years would represent a significant improvement towards the efficacy of the scheme.

¹²¹ For reference see paragraph 11 of CMM 10-2020, <https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/2021-CMMs/CMM-10-2020-CMS-31Mar20.pdf>

273. Lack of technical capacity in matters of compliance, but also lack of political will on the part of some CCPs can be important causes hindering the achievement of an effective implementation of these mechanisms. Failure to reach consensus in some cases comes, from our research, from the prevalence of a single CCP position against the general view of the MoP or the CC.
274. The Panel acknowledges the efforts and work of a small Secretariat with multiple tasks and limited resources, and welcomes its reinforcement with a dedicated Compliance Officer in 2023, which will not just increase staff numbers but bring appropriate technical compliance expertise to assist CCPs with these procedures. In particular, the Panel notes an urgent need to analyse and verify the information and data collected. To collect information without ensuring appropriate analysis and verification represents a workload burden both on CCPs and the Secretariat yielding no particular benefits. We believe the work of the Compliance Officer will bring improvements in this area and expect this task will become a high priority for the Secretariat.

Nr	Recommendation	Priority (H/M/L)
29	The Panel recommends SIOFA CCPs agree on a review of CMM 11 on a Compliance Monitoring Scheme in order to facilitate its interpretation, taking into account the changes proposed by this Panel, including to the CCR template and the rules regarding follow up action on infringements identified in previous years.	H/M
30	The Panel recommends SIOFA CCPs task the Secretariat with an assignment as high priority for the Compliance Officer the strengthening of the Secretariat's technical capacity to examine, analyse and verify the data collected for the purposes of the Compliance Monitoring Scheme.	H/M
31	The Panel recommends that SIOFA CCPs task the Secretariat to assess the capacity building needed in order to improve implementation of their obligations by the CCPs, prioritizing the most urgent and providing options to ensure appropriate assistance is provided to CCPs which so require.	M

2.6. Market-related measures

275. To date, the MoP has not adopted market-related measures, as no proposal for a measure on this matter has ever been tabled. The Agreement does not list explicitly their adoption among the functions of the MoP in Article 6. However, market measures may be and are generally considered one of the tools RFMOs can implement to monitor and improve compliance with conservation measures.
276. During CC 3 in 2019 a representative from the CCAMLR Secretariat made a presentation¹²² on the CDS for toothfish implemented under its purview, namely the *Dissostichus* Catch Document, or DCD, including an overview of the processes involved in its use in order to track catches from the harvesting vessel to final market destination. Details were also provided on the functionalities in the CCAMLR website supporting its implementation.
277. The following year, MoP 7 considered a report¹²³ on the information available on the CCAMLR website about the latter's arrangements with SEAFO, SIOFA and SPRFMO to further strengthen cooperation activities agreed with those Organisations regarding toothfish conservation and

¹²² In Annex J of CC 3 Report.

¹²³ Document reference MoP-07-30.

management, citing in particular the possible implementation of the DCD to toothfish harvested in SEAFO, SIOFA and SPRFMO waters. The document specified that (a) CCAMLR and SEAFO/SIOFA/SPRFMO should collaborate to encourage or require any Contracting Party to those organisations to implement the DCD by acceding to the CAMLR Convention or becoming a Cooperating Non-Contracting Party (NCP). Part of this collaboration would involve the provision of assistance and capacity building by the Secretariat; (b) CCAMLR should provide to SEAFO/SIOFA/SPRFMO summary CDS data for all DCDs originating from catches in adjacent areas covered by the Arrangements. On request from SEAFO/SIOFA/SPRFMO, CCAMLR could include in the DCD a declaration on whether fish was caught in a respective Convention Area in compliance with relevant conservation measures.

278. MoP 8 then considered in 2021 a report¹²⁴ on cooperation activities between CCAMLR and SIOFA during 2020, summarizing the exchange of information between both RFMOs. According to this report, SIOFA collected DCD information from CCAMLR for catch reported in the SIOFA area and also provided CCAMLR with an annual toothfish catch summary in FAO areas 51 and 57.
279. Stakeholder's views on SIOFA's action in the field of market measures are mixed. Many of them did not provide any views, possibly reflecting the lack of measures adopted by SIOFA on this matter, while others were neutral on the matter. At least one respondent marked high satisfaction with the state of play, indicative maybe of a perceived lack of need for SIOFA to adopt market measures, while another respondent noted dissatisfaction, maybe for the opposite reason. In fact, this issue may be better framed as concerning the need for tight cooperation with CCAMLR. In this respect, respondents seem to agree that if SIOFA were to consider the establishment of CDSs, priority should be given to high value species and to species for which in other RFMOs have CDSs in place, noting how CCAMLR's forty years' experience in the management of toothfish can be beneficial both to the SIOFA CCPs and Secretariat in this field. Additionally, one of the respondents underlined that many CCPs are members of CCAMLR and are required to implement the CCAMLR *Dissostichus* Catch Document even when catches are taken in the SIOFA Area.

ASSESSMENT

280. Since the MoP has not adopted any market-related measures, the Panel is unable to assess SIOFA's performance under this criterion, except where the adoption of such measures would be considered a necessary step that has so far not been taken. In this regard, we note the work carried out under a framework of cooperation with CCAMLR, an organisation which has successfully implemented a CDS for toothfish (DCD), also managed by SIOFA and in areas where, according to available data, toothfish stocks straddle across the boundaries of the respective Areas.
281. In this respect, the Panel is of the view that a market-related measure in the shape of a CDS for toothfish can be considered not just useful, but necessary. This is not just because CCAMLR's work on this is well-established and would serve SIOFA's purposes, but also because the absence of a SIOFA CDS for this species may create gaps through which CCAMLR toothfish catches could reach markets without being duly documented. This is more so that we have reasons to believe that vessels harvesting toothfish in the CCAMLR Area may also operate in the neighbouring CCAMLR management areas. Undocumented toothfish catches harvested in CCAMLR but declared, possibly, as harvested in the SIOFA Area would of course undermine CCAMLR's conservation and management efforts for these stocks. But even if no such misreporting were to happen, SIOFA can benefit from a toothfish CDS (or the implementation of the CCAMLR DCD via

¹²⁴ MoP-08-INFO-19.

cooperation) for its own particular purposes, as CDSs provide useful data to complement those collected from fisheries, adding elements for verification which can be usefully exploited not just under compliance monitoring mechanisms but for scientific purposes as well.

282. The Panel believes that in order to enjoy these benefits, the best option for SIOFA would be indeed to conclude with CCAMLR the implementation of the DCD for SIOFA catches in a formal way, provided both organisations can agree on co-management of the scheme, as we discussed in relation to the management of the resource itself in Sections 1.1 and 1.5.2, above. We understand CCAMLR's agreement would be required for this, due to its possible workload or cost implication for the CCAMLR secretariat. We would hope, however, that a practical solution can be found to avoid duplicating managing platforms in both organisations, and would encourage SIOFA CCPs to put forward to CCAMLR the benefits it could obtain from making its own DCD less exposed to the risk of misreporting of catches. In any case, capacity building for the Secretariat to implement its future functions in relation to any possible market-related measures and support CCPs in this matter could be highly beneficial.

Nr	Recommendation	Priority (H/M/L)
32	The Panel recommends SIOFA CCPs discuss the possible adoption of a new measure on a Catch Documentation Scheme, focusing, in particular, on CCAMLR's DCD, and explore options for its implementation. The Panel recommends SIOFA strengthens its cooperation with CCAMLR in this regard, including by requesting capacity building support for the Secretariat so that it can contribute to future joint work by the two organisations.	H/M

2.7. Reporting requirements

283. As indicated in Section 1.7, above, although the assessment of SIOFA's reporting requirements is included in both the Conservation and Management and Compliance and Enforcement areas, the Panel believes the assessment of these criteria can be discussed jointly, since the functions of these requirements often overlap the two areas and the issues at stake are also shared by both fields of SIOFA's activity to some extent.
284. Article 10(2) of the Agreement indeed requires from CCPs a statement of implementing and compliance measures, including sanctions. As already noted on various occasions, CMM 02 on data standards specifies in paragraph 9 the requirement for CCPs to submit each year a national report of their fishing, research and management activities. These are the two general reports CCPs must submit, which are complemented by specific one-off or regular reporting requirements. With regard to the statement of implementation and compliance, footnote 2 to paragraph 12 of CMM 11 on the Compliance Monitoring Scheme states the following: *For the avoidance of doubt, the submission of a complete CCP Compliance Report will be taken to satisfy the obligation to provide an implementation report in Article 10(2) of the Agreement.* This implies that the duty of CCPs to report on their implementation of the Agreement and its derived CMMs has become a cyclical requirement linked to the conduct of the CMS described in Section 2.5, above. Accordingly, the two main general reports CCPs must submit annually are the national report and the CCR¹²⁵.

¹²⁵ Additional, more specific, annual reports are required under various CMMs, for example, the VME Report under CMM 01 paragraph 13, the observer programme implementation report under CMM 02 paragraph 14,

285. Since MoP 4 in 2017, CCPs have tasked the Secretariat to maintain on the SIOFA website a summary table of SIOFA reporting obligations stemming from the Agreement and various CMM provisions¹²⁶. This summary is regularly updated as necessary and identifies 19 key reporting obligations in chronological order to then list, CMM by CMM, all applicable requirements, including again those already listed earlier as key. There are annual, annual as required, and one-off requirements. Some of the latter are listed despite the deadline being in the past, possibly to cater for cases where the rules would apply to newly joined CCPs or rare cases where standing CCPs may have not yet complied with it. In the case of specific rules for toothfish fisheries under CMM 15 on demersal stocks, certain data are required on a monthly or even daily basis to monitor compliance with applicable fishing constraints, in particular to allow for the fishery to be closed once catches reach 90% of the applicable TAC by monitoring catches regularly.
286. The summary table's chronological approach includes the reporting duties of both the CCPs and the Secretariat. The legal basis for each requirement is indicated as well as the availability, when applicable, of a reporting format or template to be used. The summary assists CCPs in ensuring timely compliance with their reporting requirements through appropriate planning and preparation, and also allows them to know precisely when to expect communications from the Secretariat of reports or templates to use throughout the year. Even so, stakeholders tend to agree on the demanding nature of the whole array of requirements imposed by SIOFA, due to their high number and, in some cases, technical difficulty. This is particularly challenging to CCPs who experience a need for technical capacity building and data expertise.
287. From a purely quantitative perspective, reporting requirements related to compliance and enforcement are more demanding of CCPs than those relating to technical fishery data required for the work of the Scientific Committee. The implementation, for example, of CMMs 10 on port inspections and CMM 14 on a HSBI scheme demands CCPs report promptly, or without delay, to the Secretariat all instances of inspection activities or other individual measures taken in respect of individual vessels, as they happen. The same happens to transshipment activities under CMM 10 on monitoring, to evidence of suspicion of activities by unauthorised vessels under CMM 07, and to instances of possible IUU vessel sightings and retrievals of lost and abandoned gear under CMM 09 on control. In other cases, the requirements relate to the need for SIOFA to have access to regularly updated information on, for example, CCP contact points or CCP regulations in force, as required by CMM 01 on bottom fishing.
288. With regard to reports required for the purposes of the SC work, those classed as key requirements are generally based on annual cycles and include the national report on fishing activities, VME encounters, catch and effort data, catch summaries, data verifications and observer data, all of which are to be submitted annually and are classed as key reporting obligations. To these must be added the already mentioned specific requirements applicable to toothfish fisheries under CMM 15, which include monthly catch data for the DCR MU or daily data for the WR MU. For both management units there is a further requirement to report longline setting/hauling reports on the same day of settings. The Panel is not aware of any issues in the implementation of these requirements, whether annual, monthly or daily. Any issues affecting the scientific side of the SIOFA business in terms of reporting are related not quite to the number of reporting duties, but rather to the fact that in many cases it is still for CCPs to

the annual data verification report under CMM 02 paragraph 18, and the 3 annual data reports on catch/effort, catch summaries and observer data, also under CMM 02 paragraphs 6, 7 and 15, respectively, also discussed further below.

¹²⁶

<https://siofa.org/sites/default/files/files/SIOFA%20Reporting%20and%20Submissions%20requirements%20%282023%20Updated%29-rev1.pdf>

decide at what level of resolution certain data sets are submitted¹²⁷, as well as issues of data quality that require often some comings and goings between the Secretariat and the national data contact points. In addition, data specification needs may and do evolve depending on the nature of the deliverables requested from the Scientific Committee¹²⁸, and this presents national data officers, as well as the Secretariat, with recurring additional workload and technical challenges. Finally, we note that scientific data collected from fishing activities is not always considered sufficient by the SC for it to deliver on specific tasks, notably when working on biodiversity and the protection of VMEs. Scientific research is clearly indicated as necessary to supplement the scarcity of data in this regard¹²⁹.

289. An examination of the 2022 fSCR, as discussed in Section 2.5 above, reveals that CCPs in general comply with their reporting requirements, with exceptions possibly linked to issues of insufficient technical capacity. Therefore, outside cases where the CCPs concerned suffer a lack of available expert resources at national level, it would appear that despite the burden imposed on CCP authorities, CCPs discharge their reporting duties as intended. It is difficult, however, to assess whether reporting obligations of events that must be notified without delay such as ports and at sea inspections and others are duly complied with based on the information available to the Panel. This is particularly so since no rule under the CMMs requires CCPs to submit statistics of their control (e.g., inspections carried out) or sanctioning activities, and the Secretariat is not mandated to develop statistical data on these issues from any notifications received in the course of the year.

ASSESSMENT

290. It is the Panel's assessment that the array of reporting requirements CCPs must comply with does not contain redundancies for the purposes of SIOFA's work on either conservation and management of resources or monitoring, control or surveillance of fishing activities, nor have we identified any such requirements that could be considered superfluous. There may be slight overlaps at least in the way CCPs perceive the required contents of certain reports, for example between the national report and the CCR maybe. If so, this should be addressed and resolved.
291. In fact, we would recommend CCPs share statistics regarding their control activities, as this is an area that receives no attention in the CMS despite its importance. We know this is adding to reporting requirements, but without this information, it is not quite possible to assess whether the CMMs on control are effectively implemented.
292. The summary published by the Secretariat in the SIOFA website of all reporting requirements is not user-friendly enough, in the Panel's view. The summary should, in our view, be revised to make it more systematic or replaced by a manual of reporting requirements with summaries of procedures as needed, structured by category of users (Secretariat, CCP reports at head of delegation level, national data or compliance contact points, etc.) and then by periodicity, separating annual from occasional ones. The manual could also provide immediate reference for

¹²⁷ See for example SC 7 2022 paragraph 165 where the SC encourages CCPs to *report catch, effort and observer data at the finest taxonomic resolution possible, as required under CMM 2021/02 (Data Standards) to all gear having shark bycatch*. This indicates not all CCPs report at the same taxonomic resolution. Note also the specific data call recommendation in paragraph 160.

¹²⁸ See for example, Section 1.5.4 re. the SIOFA footprint. See also various passages in the SC 7 2022 Report: paragraph 155, 4th bullet where the SC recommends CMM 02 to be *amended in order that CCPs submit all catch reporting requirements in Annex 1 to the lowest taxonomical level possible*; paragraph 190, 2nd bullet noting observer data taxonomic level as being *too broad for VMEs*.

¹²⁹ See for instance SC 7 2022 paragraph 190 1st bullet: The data scarcity in the Indian Ocean calls for urgent research exploration in areas beyond national jurisdiction.

the use of templates and data specifications as needed. Reporting manuals prove especially useful in order to ensure continuity of business in case of staff changes and facilitate training in national administrations in all cases. A manual for scientific data requirements with up-to-date specifications and specific scientific guidance for processing and submission would also provide a user-friendly reference source for national experts who must contribute to the work of the Scientific Committee.

293. A data manual would also facilitate the improvement of the templates used by the different actors involved in SIOFA data collection tasks, helping in harmonising processes and avoiding both gaps and possible redundancies. In particular, a clear distinction should be provided to users between reporting requirements relating to data sharing and reporting requirements relating to procedures such as those linked to the IUU listing of vessels, those relating to the Compliance Monitoring Scheme or those relating to the keeping of updated information on domestic measures adopted by CCPs in order to implement SIOFA measures.
294. The Panel also notes that the data management infrastructure in place at the SIOFA Secretariat is, if we are allowed to say so, quite artisanal and prone to human error. There are plenty of examples of cost-efficient data management platforms SIOFA could take inspiration from which facilitate the tasks of both data providers and data processing staff. They can take advantage of online submission and can incorporate in-built data verification mechanisms, as well as automated production of data processing reports and cross-checking¹³⁰. Such systems can be made as robust as necessary in respect of confidentiality rules. Even if the implementation of this kind of IT platform would require training and real-time assistance from the Secretariat, comparative experience suggests that investing in them pays off, not just in terms of the system's cost-efficiency itself, but also in the returns from capacity building facilitating the expansion and continuation of technical expertise in national administrations. We wish to be quite clear that these points relate to the reporting of data, and not to other types of reporting. As already said, the distinction between data reporting and other types of reporting could significantly help to improve the efficiency and timeliness of SIOFA's reporting processes, rather than the current overall consideration of all types under a single reference document on the web.
295. In the event that the SIOFA CCPs are not prepared to consider the establishment of a data management IT platform, and in the meantime of its establishment if they are, it is the Panel's assessment that quality and verification mechanisms based on clear rules and specifications are urgently needed, in order to improve the efficiency of the Secretariat's crucial work on data collection and the preparation of reports for use by both the SC and the CC.

Nr	Recommendation	Priority (H/M/L)
33	The Panel recommends SIOFA CCPs consider the option of developing a SIOFA Reporting Manual to replace the present table of reporting requirements provided for in the organisation's website. Suggestions as to the structure and contents have been provided in our assessment under this criterion.	M

¹³⁰ See also section 1.3, above.

Nr	Recommendation (Ctd.)	Priority (H/M/L)
34	The Panel recommends SIOFA CCPs consider the option of establishing an IT-based data management platform taking into account the experience gained in the design and use of such platforms in other organisations, including in-built protocols for data verification, quality checks and the protection of confidential data. A decision to explore this option should only be taken if CCPs accept and assume the need for investment on capacity building as required.	H
35	The Panel recommends, in case SIOFA CCPs are not prepared to implement an IT data platform as per Recommendation nr 34, urgent action is taken to ensure appropriate data verification protocols and quality checks are established.	H
36	The Panel recommends SIOFA CCPs agree to share data regarding the implementation of their fisheries control obligations and utilise such data in the framework of CMM 11's Compliance Monitoring Scheme in order to assess whether SIOFA's control-related measures are effectively implemented.	H/M

3. Decision-making and dispute settlement

3.1. Decision-making

296. According to Article 5 of the Agreement, the MoP is the decision-making body for matters pertaining to the implementation of the Agreement. Article 8, on its part, provides that the MoP and its subsidiary bodies *shall make decisions on matters of substance by consensus, unless otherwise provided in this Agreement. Decisions on matters other than substance shall be taken by a simple majority. When the issue arises as to whether a matter is one of substance or not, the question shall be treated as a matter of substance.* The Agreement contains no provisions on a right of objection by Contracting Parties.
297. Rule of Procedure 12 confer one vote to each of the Contracting Parties and the Participating Fishing Entity, and sets the quorum for decision-making at two thirds of Contracting Parties plus the Participating Fishing Entity together, quorum being assessed at the time the decision is taken. Decisions become binding on all Contracting Parties and Participating Fishing Entities 90 days after the date the decision was formally transmitted by the Executive Secretary, which must be done within 7 working days following the adoption of such a decision unless otherwise decided by the MoP (Rule 16).
298. Rule of Procedure 13 establishes the possibility of intersessional decision making by electronic means if proposed by the MoP Chairperson. The quorum requirement is the same as for regular decision-making under Rule 12. The Executive Secretary must promptly inform official contacts of the outcome of the intersessional decision. The Executive Secretary is also required to report to the MoP, under a standing agenda item, on decisions taken intersessionally since the previous MoP.
299. The Review Panel notes that, notwithstanding the difficulties to reach consensus on the compliance status of final compliance report, or some MCS measures as covered in Section 2.5 above, CCPs have succeeded in finding agreement on often intrinsically challenging issues,

including the establishment of a CMS which allows for some degree of peer review among them, the adoption of a HSBI scheme and, during the pandemic years, to authorise exceptions to applicable 100% coverage requirements of on-board observers. Input into this Review process suggests stakeholders generally think the SIOFA decision-making procedures are transparent and efficient. However, some among them point at instances where decisions at MoP level seem somewhat rushed, including by submission of proposals shortly ahead of meetings, leading to the adoption of CMMs provisions which may not have been sufficiently reflected upon by all CCPs or needed further elaboration. Some stakeholders wished for better preparation at CCP level of the MoP, and noted the difficulties some delegation may experience in maintaining a real time link with capitals to conclude agreements during meetings, due in particular to distance and time differences between the MoP venue and capitals. This also links to positive views among stakeholders of the use of intersessional decision-making, which is a frequent recourse in SIOFA and has been particularly useful during the pandemic years, as already noted. The Panel notes that CCPs have progressively defined and refined a process for decision-making in the intersessional period as well as a template for reporting such decisions to MoP annual sessions, and that this has become a standing point of the MoP's agenda¹³¹.

300. As for the extent to which SIOFA has transparent and consistent decision-making procedures that facilitate the adoption of CMMs and, in general, timely and effective decisions, concerns have on occasion been raised by CCPs about lack of consistency, particularly in respect of the assignment of compliance status ratings under the CMS set forth in CMM 11¹³². The Panel also notes that one intersessional decision in 2023 is inconsistent with the RoP, which reserve the initiation of the intersessional decision-making to the Chairperson of the MoP rather than to the Secretariat.
301. As for the existence of an informal mechanism of cooperation between CCPs based on reciprocities, stakeholders indicate CCPs indeed use such mechanisms to facilitate decision-making. CCPs implement different kinds of informal cooperation approaches among them to deal with matters of mutual interest, including bilateral issues and/or SIOFA matters, whether through side meetings at the margin of MoPs or meetings of its subsidiary bodies, videoconference, or in the margins of another forum. CCPs make use of customary means to cooperate informally as in most RFMOs.

ASSESSMENT

302. The Panel notes that, unlike other RFMOs with similar consensus-based decision models, the limitations or the deficiencies of this model appear to have little impact on the MoP and its subsidiary bodies in addressing critical issues in a timely and effective manner. There is hence no urgent need to consider amending the current decision rules.
303. The Panel notes that instances of insufficient time to address all agenda items during sessions did not occur frequently, although they did happen. In general, this may have been an issue in recent years due to the impact of the COVID pandemic during 2020 and 2021. However, like many RFMOs, SIOFA deals with increasingly high complex technical issues, and this is expected to result in significant challenges over the coming years for the MoP organisation and time availability. SIOFA would benefit if CCPs can focus discussions at MoP level on complex issues requiring both robust preparation ahead of the meeting but also good lines of communication

¹³¹ MoP 6 in 2019 was the first session to include an agenda point on intersessional decision-making in accordance with Rule 13 of the Rules of Procedure. MoP 9 in 2022 agreed on a standardised template for reporting intersessional decisions (paragraph 24).

¹³² See Section 2.3, above.

with capitals. This could be achieved by facilitating further intersessional decision-making on more routine-like or less complex issues.

304. The informal nature of cooperation mechanisms between CCPs based on reciprocities makes it difficult to gauge to what extent they contribute to SIOFA's ability to ensure effective decision-making, especially in terms of ensuring CCPs make the most of the limited time available during MoP sessions.

Nr	Recommendation	Priority (H/M/L)
37	The Panel recommends SIOFA CCPs consider strengthening the use of intersessional decision procedures or inter-sessional working groups to facilitate the work of SIOFA as appropriate, in order to focus MoP discussions and make better use of the time available.	M/L

3.2. Dispute settlement

305. Article 20 of the Agreement, on the Interpretation and Settlement of Disputes contains relatively standard provisions requiring CCPs to *use their best endeavours to resolve their disputes by amicable means*. Otherwise, CCPs may have recourse to the UNCLOS binding dispute settlement provisions in Section II of Part XV thereof, or to those in Part VII of the UNFSA if the dispute concerns one or more straddling stocks. The Agreement makes these mechanisms applicable to SIOFA disputes whether or not CCPs are also parties to either UNCLOS or UNFSA. In the case of Fishing Entities, the applicable procedure in case of non-amicable resolution is a binding arbitration in accordance with the relevant rules of the Permanent Court of Arbitration.
306. Additionally, CMM 14, on the SIOFA HSBI scheme includes a non-binding procedure to resolve disagreements between CCPs in the application or implementation of at-sea boarding and inspection procedures (which shall not prevent CCPs from using the dispute settlement provisions provided for in Article 20 of the Agreement if they so prefer). The CCPs concerned *shall consult in an attempt to resolve the issue*. If unresolved, *the Executive Secretary shall, at the joint request of CCPs, refer the disagreement to the next meeting of the Compliance Committee*, which shall establish a panel of five representatives agreeable to the CCPs concerned to consider the matter. The panel's report shall be forwarded to the CCPs and the MoP. The MoP may provide appropriate advice with respect to any such disagreement for consideration by the relevant CCPs.
307. To date, no formal settlement of dispute procedure has been initiated by any CCP, under either of the two sets of procedures in question. However, input received from stakeholders points at important issues on which CCPs positions and legal interpretations significantly disagree. They concern, for example, SIOFA's competence to regulate bottom fishing on the Saya de Malha Bank, the scope of the HSBI or the extent to which the bottom fishing constraints are correctly implemented by CCPs. We understand that CCPs continue pursuing dialogue and consultations on these issues and see dispute settlement procedures as a last resort if all other efforts fail, and that the return of presential sessions of the MoP is perceived as something that facilitates this dialogue in earnest.

ASSESSMENT

308. The Panel recognizes that Article 20 of the Agreement establishes adequate dispute resolution mechanisms. First, calling on the CCPs to do their best efforts to resolve differences through

amicable means, and by establishing the application of the relevant provisions of UNCLOS or UNFSA as binding procedures.

309. The Panel assesses positively the specific non-binding procedure established under CMM 14 in case of a disagreement related to the application or implementation of high seas boarding and inspection procedures. The Panel notes this procedure does not exclude binding procedures in case this one does not allow the CCPs concerned to resolve the dispute or if they simply prefer to initiate a binding procedure in accordance to Article 20 of the Agreement. This is expressly established in Article 57 of CMM 14.
310. The Panel acknowledges that to date no binding procedure has been initiated by CCPs, which can be considered as a sign of effective dialogue between them. Notwithstanding, the Panel also notes the persistence of different views among CCPs concerning specific matters and would encourage them to make every effort to resolve them through continued dialogue and consultation, since we are also of the view that binding dispute settlement procedures should be considered as a last resort if all other means fail.

Nr	Recommendation	Priority (H/M/L)
38	The Panel encourages SIOFA CCPs to continue and if needed intensify dialogue on matters of concern to different CCPs, where consensus has not been achieved in order to find a common view which can be satisfactory to all CCPs. In particular, the Panel recommends to address bottom fishing activities in the Saya de Malha Bank, the scope of boarding and inspection procedures under CMM 14 and the issue of managing overlapping obligations for vessels arising from both SIOFA and neighbouring RFMOs, in particular the IOTC.	M

4. International cooperation

4.1. Transparency

311. Article 14 of the Agreement requires CCPs to promote transparency in decision-making processes and other activities carried within its scope. Coastal States bordering the Area non-contracting parties to the Agreement, other non-contracting parties, IGOs concerned with matters relevant to the implementation of this Agreement, and representatives from NGOs concerned with matters relevant to the implementation of the Agreement can participate in MoP and meetings of its subsidiary bodies as observers. Article 14 also states that RoP of the MoP and its subsidiary bodies *shall not be unduly restrictive for observers' participation and the observers shall be given timely access to pertinent information subject to the Rules of Procedure, including those concerning confidentiality requirements.*
312. Rule 20 of the RoP declares ordinary and extraordinary MoPs and subsidiary bodies' meetings open to observers, except where the meeting is to consider financial matters, discussions concerning the selection and appointment of the Executive Secretary, or other matters that the MoP or its subsidiary bodies decide to discuss in a closed session.
313. The SIOFA general policy on data confidentiality and procedures for access and use of data is, as already noted on various occasions, embodied in CMM 03 on data confidentiality. Its provisions apply to data collected from CCPs in accordance with the Agreement and relevant SIOFA CMMs. The MoP has also adopted the SIOFA standard operating procedure for data use and data

requests and some provisions articulated in other CMMs, such as CMM 10 on monitoring, CMM 11 on the compliance monitoring scheme, CMM 9 on control to complement the policy and data procedures in specific cases as required.

314. With regard to observers, less than 10 are recorded as participating in SIOFA proceedings in recent years, not all of them joining the MoP every year. Since MoP 1 in 2013, there have been many instances of observers, including IGOs and NGOs, submitting papers or reports to the MoP as well as its subsidiary bodies to contribute to CCP discussions on different topics. From our research and interviews, we note that there have been no formal complaints from observers about their participation. However, the Panel notes that the public availability of some SIOFA documents was discussed in the two most recent MoP sessions under the agenda item on confirmation of meeting documents in 2021 and 2022. MoP 9 also agreed (paragraph 128) to consider reviewing CMM 03 at its 10th session in 2023 to provide requested advice to the SC on criteria governing SC observers' access to documents and data. In addition, there is no specific section of the SIOFA website to compile and disseminate "public domain data", and "public domain catch and effort data" as per para 2(d) of CMM 03. Some stakeholders have expressed the view in their input to the Panel that transparency is one of the areas in need of reinforcement, particularly regarding better access to SIOFA data and documents, including through an improved structure and design of the SIOFA website. There have been positive steps taken to improve transparency, but this has moved at a very slow pace. At the moment, there is no mechanism to disseminate data to the public, several reports are only visible to CCPs and observers – in some instances only to CCPs – and some important documents are publicly accessible but extremely hard to find (for example, the annual national reports). However, SC 8 has taken positive steps, including making the abstracts or summaries of all papers submitted to it available to the public. SC 8 also agreed the publication of the SIOFA Ecosystem Summary and fisheries summaries for some of the primary species, and the establishment of a web-based platform to disseminate data.

ASSESSMENT

315. It is the Panel's assessment that the current practice of SIOFA is generally **in line with Article 14 of the Agreement and Article 7.1.9 of the FAO Code of Conduct for Responsible Fisheries**, which indicates States and subregional or regional fisheries management organizations and arrangements *should ensure transparency in the mechanisms for fisheries management and in the related decision-making process*.
316. As to transparency in respect of **meeting reports, scientific advice and other relevant materials**, the Panel's assessment is more nuanced. We believe transparency is improving but at a slow rate, whereby we see as positive steps those taken by SC 8 to improve dissemination of data and reports submitted to the SC.
317. The Panel also notes the SIOFA website is being updated and believes it could be more user-friendly or intuitive for CCPs and other users, in order to ensure better access to information about SIOFA's work by stakeholders and the public at large.

Nr	Recommendation	Priority (H/M/L)
39	The Panel recommends SIOFA CCPs continue to review, clarify and amend as appropriate the relevant data rules or provisions so that all CCPs as well as observers and the general public have better access to data and information for the purpose of discussion and decision-making.	M

Nr	Recommendation (Ctd.)	Priority (H/M/L)
40	The Panel recommends SIOFA CCPs task the Secretariat to review the documents and materials on the SIOFA website and make necessary tunings in accordance with any new data rules on dissemination and any relevant decisions of the MoP.	M

4.2. Relationships with CNCPs

318. Article 17 of the Agreement deals with the responsibilities of the Contracting Parties and Fishing Entities towards Non-Contracting Parties. It stipulates that Cooperating Non-Contracting parties *shall enjoy benefits from participation in the fishery commensurate with their commitments to comply with, and their record of compliance with adopted conservation and management measures.*
319. Rule 17 of the RoP further complements Article 17 of the Agreement, and the Executive Secretary is tasked by the MoP with contacting relevant Non-Contracting Parties every year to request they cooperate with the MoP by acceding to the Agreement or applying for a Cooperating Non-Contracting Party status in SIOFA.
320. In addition to sending invitation emails, the SIOFA Secretariat also developed a document¹³³, accessible in the SIOFA website, indicating the timeframe, contact information, and relevant information as per the RoP to facilitate the participation of interested parties or organizations. The interested parties or organizations are required under Rule 17 to submit annually an application with a formal written statement of commitments and are subject to a performance assessment under the SIOFA Compliance Monitoring Scheme (CMS) carried out by the Compliance Committee¹³⁴. The Executive Secretary circulates any application received together with the relevant commitments to CCPs. The MoP will review such applications and determine whether any applicants qualify to be granted or retain their status every year, as the case may be.
321. SIOFA counts currently with two CNCPs. In 2021, one CNCP application was discussed. However, the Compliance Committee was unable to reach consensus on it. MoP 8 invited the applicant to submit a revised application with the required statement and more detailed information in order to address the concerns raised by CCPs. Due to administrative difficulties, no new application was submitted to MoP 9 in 2022. The Panel notes that the MoP has so far adopted no rules or standards guiding the reviewing criteria of CNCP status applications. This, however, does not prevent a general view among stakeholders that SIOFA's relationships with CNCPs are satisfactory to date.

ASSESSMENT

322. The Panel believes that it is essential to continue current practice by tasking the Secretariat to contact CNCPs as well as non-contracting parties to cooperate with the work of SIOFA, and to facilitate communication in line with the Agreement and the RoP.
323. The MoP may wish to task the Secretariat with further incorporating relevant information for CNCPs on the SIOFA website, particularly the relevant SIOFA obligations concerning the granting

¹³³ <https://siofa.org/sites/default/files/files/How%20Join%20or%20contribute%20to%20SIOFA%20.pdf>

¹³⁴ The CMS has been discussed in more detail in Section 2.5, above.

of CNCP status, and the assistance that CNCPs may request for capacity building, so as to further encourage cooperation.

324. The Panel also believes a strategy or a communication program that incorporates non-parties might contribute to SIOFA's efforts to facilitate cooperation; however, it appears that there is no urgent need at this stage and such work is likely to be time/resource-consuming.

Nr	Recommendation	Priority (H/M/L)
41	The Panel recommends SIOFA CCPs engage in discussion on the rules, standards and procedures regarding the granting of CNCP status, including the clarification of the requirements for admission or CNCPs status renewal, in order to ensure a consistent reviewing approach. The adoption of clear rules as well as an application template is also recommended, providing CNCP with general instructions on the required information, actions, and any other criterion.	M

4.3. Relationships with non-CCPs undermining the objectives of the Agreement

325. In accordance with Article 17(3) of the Agreement, *CCPs shall draw the attention of any non-CCPs to any activity undertaken by its nationals or vessels flying its flag which undermines the effectiveness of conservation and management measures adopted by the MoP or the attainment of the objectives of this Agreement.* Article 17(4) also establishes the duty of CCPs acting individually or jointly, to request non-CCPs with active vessels in the Area to cooperate fully in the implementation of the CMMs adopted by the MoP with a view to ensuring such measures are applied to all fishing activities in the Area.
326. As already noted in Section 2, above, the IUU fishing activities of non-CCPs in the SIOFA Agreement Area have been one of the important topics for SIOFA over recent years, particularly in relation to the listing of IUU vessels. SIOFA CCPs exchange views and discuss this matter within the CC and the MoP. The SIOFA Secretariat is also tasked to contact the non-CCPs concerned in order to seek their cooperation with SIOFA.
327. There are currently two IUU vessels on the SIOFA IUU list, either flagged, or previously flagged, to non-CCPs. In their response to SIOFA's demarches under the IUU listing procedure, the flag States concerned expressed their willingness to cooperate with the MoP in resolving the issues at stake.

ASSESSMENT

328. It is the Panel's assessment that the actions followed by SIOFA in respect to non-CCPs so far have shown positive results, as the non-CCPs concerned have been willing to cooperate with SIOFA in resolving identified issues of activities undermining the objectives of the Agreement. The Panel also believes that relationships with CNCPs and relationships with non-CCPs could be considered collectively, as in both cases the goal is to promote cooperation to achieve the objectives of the Agreement.
329. The Panel also believes that the discussions and recommendations on the allocation of fishing rights among CCPs and provisions for new entrants, MCS measures (including market-related measures), and the cooperative mechanism to deter activities undermining the objectives of the Agreement will also affect or encourage cooperation with those non-CCPs.

330. In light of our assessment, the Panel sees no need to issue any recommendations under this criterion.

4.4. Cooperation with international organisations

331. Article 16 of the Agreement provides that *the Contracting Parties, acting jointly under this Agreement, shall cooperate closely with other international fisheries and related organizations in matters of mutual interest, in particular with the South West Indian Ocean Fisheries Commission (SWIOFC) and any other regional fisheries management organization with competence over high seas waters adjacent to the Area.*
332. To operationalize Article 16 of the Agreement, the efforts, and progress in cooperation with international organizations is to be presented by the Secretariat to the SC and the MoP. SIOFA website contains a section with updated information regarding the international cooperation between SIOFA and other international organizations.
333. Currently, the SIOFA cooperates with ACAP, FAO FIRMs, and CCAMLR through different frameworks. The SIOFA concluded an MoU with ACAP in 2018. SC 7 in 2022 explicitly welcomed ACAP's continued cooperation with SIOFA and its participation and contribution to the work of the SC, its working groups, and the Workshop on the Harmonization of Scientific Observers Programmes.
334. The Partnership Arrangement between SIOFA and the FAO was signed in 2020. The objective of this Arrangement is for international cooperation in the development and maintenance of the FAO Fisheries and Resources Monitoring System (FIRMS). The SIOFA Secretariat has participated in meetings of the FIRMS technical working groups and Steering Committee. Work to define the data provision arrangements between SIOFA and FIRMS is still ongoing.
335. The Arrangement between SIOFA and CCAMLR was signed in 2018 and the level of cooperation has increased over recent years, including holding a toothfish data exchange workshop in November/December 2021, the operation of the SIOFA/CCAMLR joint toothfish tagging program, the adoption of a process for the exchange of scientific toothfish data and the collection of CDS and observer relevant information. Both RFMOs also provide reciprocal links to their respective IUU vessel lists.
336. Cooperation between SIOFA and IOTC is reported already at MoP 1 in 2013, since IOTC had hosted the database for SIOFA data before the latter's full operation. IOTC is also an observer to SIOFA since its first session. However, SIOFA has not concluded a formal cooperation arrangement with IOTC yet. As the IOTC and SIOFA Areas of competence largely overlap with each other and there are concerns about the IOTC non-target catches of SIOFA specie, as well as about incompatibility of MCS measures vessels are to comply with under each of the 2 RFMOs, MoP 9 reaffirmed in 2022 its intention to conclude a non-legally binding arrangement with IOTC and tasked the SIOFA Secretariat to further progress the cooperation with the IOTC. At the time of writing, SIOFA is in the process of seeking to conclude a cooperative agreement with IOTC during the intersessional period¹³⁵.
337. With regard to SWIOFC, cooperation with SIOFA was discussed at recent meetings of both organizations. SWIOFC is mainly concerned with coastal fisheries and is not empowered to adopt binding measures but its mandate is consultative in nature¹³⁶. Its relevance to SIOFA lies in the

¹³⁵ SIOFA CIRCULAR nr. 2022/46, SIOFA CIRCULAR nr. 2023/09.

¹³⁶ As a Regional Fisheries Body established under Article VI of the FAO Constitution.

fact that its Area of competence overlaps with that of SIOFA for most the latter's western part, namely FAO Area 51. Whereas SIOFA's competence only applies to the waters beyond national jurisdiction in the Area, SWIOFC allows its members to cooperate towards the sustainability of the resources occurring in their respective EEZs. SWIOFC counts among its members a number of coastal States that are SIOFA CCPs as well, albeit not all of them. Those which are not yet SIOFA CCPs are regularly invited to join SIOFA's meetings and activities. Both organisations have a special interest in cooperation due to their responsibility over the same kind of non-migratory resources, some of which might at some point be found to be straddling the EEZ-High Seas demarcation boundary. The SIOFA Secretariat has proposed an overview of the main areas for possible collaboration between the two organisations. However, they have not yet agreed formally any cooperation framework with each other, and SWIOFC's presence as observer in SIOFA MoP meetings has been limited so far.

338. In addition to the abovementioned international organizations, the SIOFA Secretariat also joins meetings of other international organizations such as SPRFMO, the FAO Deep-sea fisheries in ABNJ Project, and the FAO Regional Fishery Body Secretariats' Network. The SIOFA Secretariat also has initiated a dialogue with its SEAFO counterpart to further bilateral cooperation. As discussed in Section 2.5, above, with regard to the cross-listing of IUU vessels the SIOFA Secretariat also contacts and transmits the List and any relevant information to the FAO and to the Secretariats of CCAMLR, CCSBT, ICCAT, IOTC, IATTC, GFCM, NAFO, NEAFC, NPFC, SEAFO, SPRFMO, and WCPFC for the purposes of enhancing cooperation with them, aimed at preventing, deterring and eliminating IUU fishing.
339. The Panel notes that IOTC, CCAMLR, SPRFMO, CCSBT and SEAFO are those regional fisheries management organizations with competence over high seas waters adjacent to the SIOFA Area as indicated by Article 16 of the Agreement.
340. Stakeholder input into this Review indicates general satisfaction with the cooperation between SIOFA and other international organizations, particularly with CCAMLR. Many stakeholders are of the view that cooperation with IOTC and CCAMLR should be enhanced to deal with the challenges of ensuring effective conservation and management for resources whose stocks overlap their respective Areas.

ASSESSMENT

341. The Panel notes that there are more than 5 international organizations listed in Article 16 of the Agreement. Prioritisation and allocation of SIOFA's efforts and resources are crucial for further engagement and cooperation with those international organisations. The MoP should therefore consider an assessment of cooperation needs and next steps to meet the Agreements' requirements, particularly those provided for in Article 16.
342. In particular, the Panel assesses positively and commends SIOFA's cooperation with ACAP and FAO. However, the Panel believes there is scope to improve the relationship with organizations such as CCAMLR, CCSBT and IOTC, with a view to promoting the objective of the Agreement, including data sharing and co-management options, as appropriate. Our positive assessment is without prejudice to the points made and Recommendations issued under Sections 1.5.2 and 2.6, above, regarding tighter cooperation between SIOFA and CCAMLR on, respectively, the management of shared toothfish stocks and the implementation of market-related measures. The same applies to the points made in various Sections of this report regarding the overlapping of SIOFA and IOTC measures concerning high-seas inspections, in particular Section 2.5. We encourage SIOFA CCPs to seek to resolve these issues in parallel and in conjunction with

discussions towards a cooperation arrangement under discussion with IOTC, underway at the time of writing.

Nr	Recommendation	Priority (H/M/L)
--	Recommendations nr 11, 20 and 32 on the strengthening of cooperation between SIOFA and CCAMLR also apply to the issues assessed under this criterion.	--
42	The Panel recommends SIOFA CCPs consider strengthening cooperation with the IOTC, SWIOFC, SEAFO, SPRFMO, and CCSBT, as appropriate.	H
43	The Panel recommends SIOFA CCPs include a prerequisite in their consideration of CMM new or amended proposals the review of relevant measures adopted by neighbouring international organizations in order to promote a coherent approach and compatibility of fisheries management across RFMO boundaries.	M

4.5. Special requirements of developing States

343. The needs of developing States bordering the Area are taken into account as articulated in Article 2 as a factor in the pursuit of the objectives of the Agreement. The special requirements of developing States bordering the Area are particularly recognized in Article 13 of the Agreement, which lists possible areas for assistance. Focus is placed on the need for such States to be supported towards participation in fisheries and sustainable management of resources. The Agreement's provisions on the special requirements of developing States focus on those States bordering the Area only. Some such developing States, but not all of them, are already SIOFA CCPs. As already seen in Sections 4.2 above and 4.4 above, SIOFA regularly invites such States to become members or otherwise apply for CNCP status.
344. SIOFA implements these principles first and foremost in the way its funds its own functioning. The Financial Regulations contain a formula in Regulation 5 for the calculation of annual Contracting Parties and Participating Fishing Entities (CP and PFE) contributions with a national wealth component equal to 30% of the budget, which is determined by each CP and PFE's Gross National Income and Gross National Income per Capita. The formula and its application are discussed in more detail in Section 5 below.
345. On the other hand, SIOFA has established procedures to grant financial assistance to developing States bordering the Area in order to support their participation in SIOFA's proceedings and activities. MoP 9 amended Financial Regulation 3.4 and also added a new Annex I to the Financial Regulations to enable the adoption of the guidelines referred to in Financial Regulation 7.9 for the purposes of administering funds to provide assistance to developing States, as mandated by Article 13(4) of the Agreement. The SIOFA budget contains a line dedicated to the "Administration of Article 13.4", which includes financial assistance for travel to meetings and accommodation, and for other activities. In the budget adopted for the 2023 exercise, the "other activities" sub-line is not funded. Therefore, apart from travel and accommodation for developing States' participation in SIOFA meetings, there are no budget appropriations to fund, for example, capacity building activities in respect of the other areas and objectives listed in

Article 13(4) of the Agreement, nor there seems to be any specific such support among the voluntary contributions received by SIOFA so far¹³⁷.

346. The SIOFA CMMs do not contain specific references to the special requirements of developing States bordering the Area, and the information on the SIOFA website on this issue is quite limited.
347. Input into this Review reveals stakeholders' views on these issues are quite mixed. There is general agreement on the fact that SIOFA recognizes the special requirements of developing States, but stakeholders tend to disagree on whether relevant assistance is actually provided to such States by SIOFA.

ASSESSMENT

348. The Panel believes that SIOFA's attention and efforts to cater for the special requirements of the developing States bordering the Area could be strengthened beyond financial support for meeting attendance, in order to ensure the full implementation of the many provisions under the Agreement and other international instruments such as UNFSA and the FAO Code of Conduct for Responsible Fisheries that provide recognition and require action in this regard.
349. We note an absence in MoP reports, in particular, of any discussions relating to the actual needs and/or challenges experienced by SIOFA CCP developing States bordering the Area. It is our view that such States should take the initiative to raise their needs and challenges, should they require assistance from fellow CCPs in order for the latter to respond in a focused and effective manner whether, individually or collectively.
350. As we have seen in previous sections, issues of capacity building may affect the efficiency and efficacy of SIOFA's efforts on various fronts. We have issued recommendations in respect of this matter in Sections 1.2 regarding the implementation of the Ecosystem Approach, 2.5 on mechanisms to ensure compliance with CMMs and 2.7 on reporting requirements.

Nr	Recommendation	Priority (H/M/L)
44	The Panel recommends SIOFA CCPs consider setting up a section on the SIOFA website dedicated to SIOFA's implementation of Article 13 of the Agreement, presenting the assistance that may be provided individually or collectively by CCPs to meet the special requirement of CCP developing States including, in particular, the least developed among them, and small island developing States.	M
45	The Panel Recommends that SIOFA CCPs agree on a periodical review by the MoP of the organisation's implementation of Article 13 of the Agreement and encourage CCP developing States to proactively express their needs, challenges and special requirements affecting their contribution to SIOFA's work. The MoP may thereafter consider establishing a fund dedicated to these purposes or expanding the scope of the current one.	M/L
--	Recommendations nr 6, 31 and 34 on various areas where capacity building assistance could be provided by SIOFA also apply to the issues assessed under this criterion.	

¹³⁷ See also Section 5, below, in this respect.

5. Financial and administrative issues

5.1. Availability of resources for activities

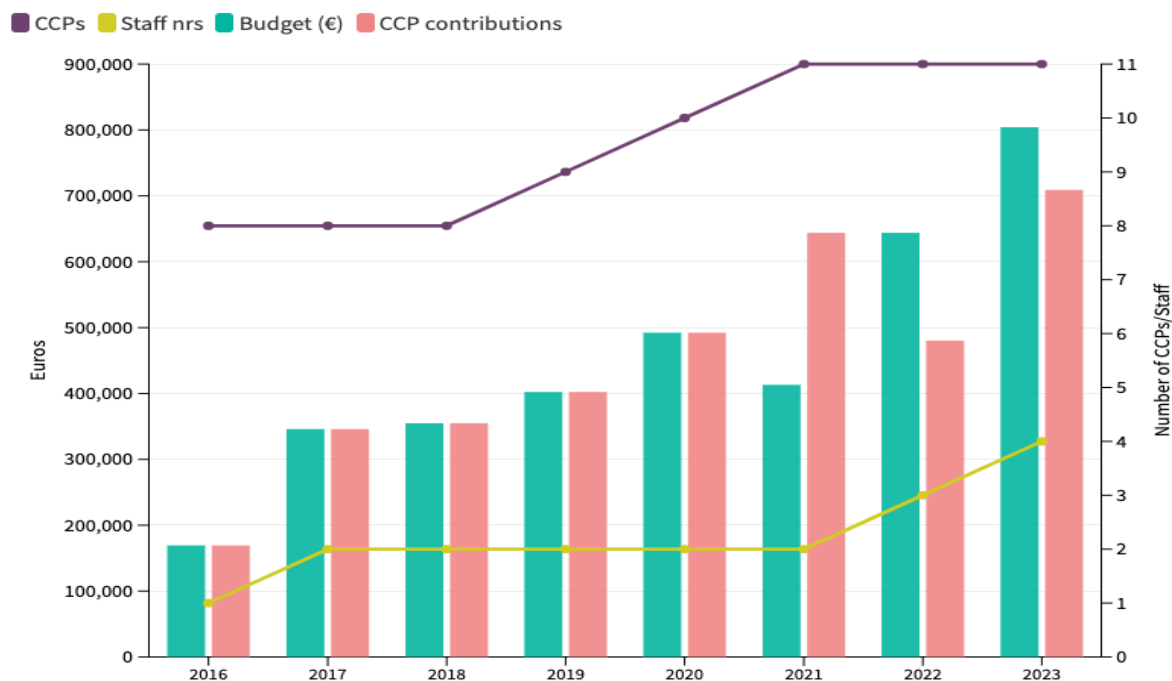


Figure 9 : Evolution of the SIOFA budget vs CCP Contributions amount and CCP numbers. The 2021 budget was revised intersessionally. Excess CCP payments plus a reserve fund, together totalling 163,652€, were accounted for reduction of CCP contributions towards the 2022 budget. In the case of the 2023 budget, CCPs contributions are also lower than the adopted total budget as partially funded to an amount of 95,222€ in the reserve fund.

351. With regard to SIOFA's **financial resources**, Article 5(4) of the Agreement sets the duty of Contracting Parties to adopt a budget to fund the conduct of the MoP and the exercise of its functions, as well as accompanying Financial Regulations which must include the criteria for determining the financial contributions each Contracting Party or Participating Fishing Entity must make (Cooperating Non-Contracting Parties are not required to contribute to the budget, nor are they granted voting rights). The Agreement already foresees that these criteria must take into account the economic status of the contributor, the benefits contributors take from fishing in the Area and the special requirements of developing States.
352. The SIOFA budget is an operational budget. Although its structure has somewhat evolved, its various chapters correspond to staffing, infrastructure and logistics costs, with only one line dedicated to the funding of research activities present in the budget from 2017 until 2021.
353. The first budget agreed by the MoP was adopted at the extraordinary Meeting held in 2015, based on a 2-tiered set of contributions, a lower amount for 3 contributing CCPs and a higher one for the other 5 then remaining contributing CCPs. In 2016, MoP 3 adopted the SIOFA Financial Regulations (current version dated 2022), including a formula for the calculation of annual contributions in regulation 5.2. On this basis, MoP 3 adopted the first regular budget for the second semester of that year and the annual 2017 budget. As adopted then, the formula for annual contributions consisted of 3 components as percentages of the total budget: a 10% base, with equal shares for all CCPs, a 30% based on national wealth (50% of which based on GNI, 50%

based on GNI per capita) and 60% based on each CCP's proportion of catches made in the Area. However, Regulation 5.2 stipulated a 3-year period after the adoption of the Financial Regulations during which the formula would not apply. Therefore, the first budget prepared using the formula was the one adopted for 2019. Until then, CCPs continued applying a 2-tiered approach, with one CCP contributing a lower amount and the rest an equal, higher amount.

354. Financial Regulation 5.2 was amended by MoP 6 in 2019 (paragraph 151). The amendment concerned a split of the 60% catch component into 2: 30% in proportion to catches of high-value species (orange roughy, alfonsino, toothfish and all species of deep-sea sharks) and 30% in proportion to catches of other, lower-value species. MoP 6 adopted the budget for 2020 with a calculation of CCP contributions based on the amended formula. The formula so amended continues to apply to date.
355. Payment by contributing CCPs of their annual dues has been regular except in very limited cases for which the MoP agreed not to deprive the CCPs concerned of their voting rights, as would have otherwise been required by MoP Rule of Procedure 14.
356. The Panel has been made aware of certain difficulties encountered by the Secretariat when applying the formula to calculate annual contributions. These difficulties relate to 2 different elements: firstly, the catch component is calculated on the basis of the catch data submitted by contributing CCPs. At least in one case, the Secretariat does not receive the data necessary to make the calculation. Secondly, the wealth component relies on Gross National Income and Gross Income Per Capita data as defined by the World Bank, under Financial Regulation 5. However, the World Bank does not report this data for all contributing CCPs. Regulation 5 allows the use of an equivalent for reference to an equivalent institution in the case of fishing entities. The Secretariat has been able to apply this equivalence with some latitude and use alternative sources of information at the UN level to make the necessary calculations when needed. To date, there is no evidence that CCPs have had any issues with the Secretariat's approach.
357. With regard to voluntary contributions, they are contemplated in Financial Regulation 6. They must be formally accepted by the MoP and be designated for a specific purpose. We note that although Financial Regulation 6 mentions voluntary contribution only from a Contracting Party or a Participating Fishing Entity, Financial Regulation 7(3)(e) also seems to implicitly admit such contributions *from observers and any other entities*. The two provisions, therefore are not quite in line.
358. SIOFA has been receiving voluntary contributions on a regular basis since 2018. The data about voluntary contributions is not included in the budget, but is reported separately by the Secretariat in its annual financial report. From the successive reports presented, to date is SIOFA has received 10 voluntary contributions (9 from the EU, one from Australia) to an amount of over 323,000 €, with a further 83,000€ pending as final project payments due at the time the 2021 financial report was presented to MoP 9 in 2022. Furthermore, an EU grant for the funding of this Performance Review Process was offered and accepted during 2022 for a total of 200,000€ and 2 further EU grants are listed in the 2021 report as awaiting signature during 2022, for a total amount of 218,301€, one of which is in support of the organisation of SC 8 in 2023. All voluntary contributions so far, except the two just cited, have funded scientific work, including stock assessment and scoping studies for the three key species (orange roughy, alfonsino, Patagonian toothfish) and deepwater sharks, VME mapping and the SIOFA bottom fishing impact assessment (BFIA). As already noted earlier, there was a budget line entitled "research activities" in every annual budget between 2017 and 2023. The funds allocated under this line have varied between 30,000€ and 50,000€ depending on the year. It is difficult to assess from the information available to the Panel what exactly this line is used for. In any event the amount budgeted is far

too low to cover the expenditure needed by the Scientific Committee, were the line meant for that use, hence the need for voluntary contributions to fund this work, generally carried out via consultancy project contracts.

359. Indeed, to gain a rough idea of what these additional funds represent, if we added all the voluntary contributions paid plus those offered but still awaiting payment, the total of funds voluntarily contributed to SIOFA from 2018 to date amounts to about 825,000€. On the other hand, the sum of annual contributions to the budget during the same period amounts to a total of 3,082,319€. Therefore, voluntary contributions have increased the funds available to SIOFA beyond its regular budget by about 25% for the period 2018-2023.
360. External audits of the SIOFA accounts, mandatory under Financial Regulation 11, have been carried out every year since 2017 and their results are presented to the MoP at each annual session. To date, all audits have assessed the accounts as compliant with the Financial Regulations.
361. Finally, Article 7 of the Agreement on subsidiary bodies only lists the Scientific and Compliance Committees as such, but allows the MoP (paragraph 7.3) to *establish such temporary, special or standing committees as may be required* (...). CCPs adopted Terms of Reference for a Standing Committee on Administration and Finance (SCAF) at the Extraordinary MoP held in 2015. SCAF functions are also cited in various provisions of the Financial Regulations. However, the MoP has not formally established SCAF to date. Until it does, and in accordance with Financial Regulation 3.6, its functions are to be carried out by the MoP itself.

ASSESSMENT

362. Although stakeholders are generally satisfied that SIOFA has sufficient financial and other resources to carry out its work, the organisation has become quite dependent in recent years on voluntary contributions without which it is doubtful key scientific work would have been possible to fund, or even this very Performance Review process. Voluntary contributions are also very one-sided and if an extra effort to contribute funds is required, the burden should be more equitably shared. In these conditions, reservations to increases of the annual budget are not sustainable. CCPs need to decide on a costed, at least medium-term strategic plan for the Scientific Committee and agree on a fair sharing of these costs among them.
363. The contributions formula would be worth reviewing. We believe issues around a reliable account of the catch component and the sources of information used to calculate the national wealth component should be discussed and, where possible, clarified in the Financial Regulations.

Nr	Recommendation	Priority (H/M/L)
46	The Panel recommends SIOFA CCPs urgently agree on a strategic financial planning for the medium term taking into account the costs incurred over recent years for the funding of the Scientific Committee work, and commit to a fairer sharing of these costs, including by contributing in kind CCP scientific resources.	H/M

5.2. Efficiency and cost-effectiveness

364. With regard to human resources, MoP 3 adopted the SIOFA Staff Regulations in 2016, but the current version dates from 2022. The Staff Regulations follow established best practices in RFMOs and rely on UN pay scales and other principles. As for the establishment of the SIOFA Secretariat, CCPs arranged for alternating secretariat services offered by the MoP hosts until MoP 3 in 2016. For that year, Mr Orlando Fachada (EU) served as interim Executive Secretary, including for the management of a selection procedure resulting in the appointment of Mr John Lansley as Executive Secretary. Mr Lansley was the only staff employed by the Secretariat until 2018, when Mr Pierre Périès was recruited as a Data Manager. Mr Lansley was succeeded by Mr Thierry Clot in December 2019. In 2022, a Science Officer, Dr Marco Milardi, was recruited, and a Compliance Officer, Mr Johnny Louis was selected for recruitment, entering into service 1 February 2023. In accordance with the SIOFA Staff Regulations, the Secretariat is allowed to employ interns for a period of no more than 6 months and the Secretariat has made use of this facility on a regular basis.
365. MoP 8 in 2021 requested from the Executive Secretary a long-term plan for the structured development of the Secretariat's capabilities in a 2-5 years period after 2022 (paragraph 194). It also requested him to investigate options for the improvement of the Secretariat's premises (paragraph 195). The Executive Secretary presented his report to MoP 9 in 2022. In addition to the recruitment of the Compliance Officer – now completed – the long-term plan covered essentially a cost forecast under 4 scenarios for the period 2023-2025, focusing on staff costs, but with no scenario for an increase of permanent staff. It also discussed the relocation of the Secretariat to new premises. The Secretariat's offices are hosted at the French Directorate of Food, Agriculture and Forestry (DAAF) in Reunion Island. They are now at full capacity as they can accommodate a maximum of 4 SIOFA members of staff, which is the current SIOFA complement. The Executive Secretary has reported to the MoP over the past 2 years on options for new Secretariat premises, which, according to the Headquarters' Agreement between SIOFA and the French Republic, must be provided by the French authorities free of charge. However, potential premises are scarce on the location and suitable ones have been possibly identified, but would not be available until 2024. MoP 9 noted the report and agreed (paragraphs 213-214) to create the Compliance Officer position and retain the data officer position. Mr Clot was reappointed for another 4-year term (paragraph 233) and a formal procedure for the recruitment of the Executive Secretary was also adopted for future use (paragraph 231).
366. When discussing human resources, mention must be made once again of the difficulties encountered by SIOFA to appoint Chairs and Vice-Chairs of its subsidiary bodies. This is regulated by Rule of Procedure 5; however, in recent years these rules have been impossible to implement as intended. Table 3 in Section 1.4 already presented the history of appointments to these offices. Candidates were volunteered by CCPs until 2019. In 2020 and 2021, the impact of the COVID pandemic prevented in-person meetings and the various activities of the SIOFA bodies were coordinated as well as possible via virtual meetings and correspondence. The MoP Chairperson is appointed for a one-year term and therefore only officiates during a single MoP. On occasion, the appointed person had to be replaced during the intersessional period due to unforeseen circumstances. This may run counter to appropriate continuity of work, particularly in light of the importance of intersessional decisions in SIOFA.
367. Ahead of MoP 7 in July 2020, the MoP Chairperson informed CCPs via circular of the absence of any candidates for the position of Scientific Committee Chairperson and proposed a new approach consisting in recruiting an independent Chairperson on a consultant, part-time contract. This was accepted and MoP 7 confirmed the intersessional decision to appoint Mr Alistair Dunn to the position. According to the Report on Staff Resources and Secretariat Activities

submitted to MoP 9 in 2022, the positions of Vice-Chairs of the Compliance Committee and the 2 working groups of the Scientific Committee (PAEWG and SERAWG) remained vacant in 2021. CCPs endorsed the SC recommendation to extend Mr Dunn's term for one year (paragraph 173).

368. The Panel notes that Mr Dunn's contract covers his remunerated services for a total of 25 days of meetings and 15 days of preparation, and that the contract is for a one-year term, extendable, whereas under Rule of Procedure 5, the prescribed term is 2 years. This rule cannot be applied inasmuch as the budget for the recruited Chairperson's remuneration is subject to an annual cycle of approval by the MoP.
369. With regard, lastly, to SIOFA's **meeting schedule**, the Panel notes that the meetings of the Scientific Committee are scheduled generally to take place in late March every year. As seen in Section 1.3, above, the deadline for catch, effort and observer report data submission by CCPs is set at 31 May each year, whereby the SC takes place before key data has been compiled by the Secretariat. We have issued a Recommendation for CCPs to resolve this issue in that Section. Apart from this issue, SIOFA's scheduling practices are not really different from those in other RFMOs.
370. SIOFA's work during the COVID pandemic was significantly impacted. MoPs 7 and 8, as well as CC 4 and 5 were conducted virtually during the 2020-2021 period. In the case of the SC, the use of online meeting facilities extended until 2022, including all working groups and workshops. The impact was felt by the MoP in particular due to CCPs inability to use informal mechanisms to consult in the margins, but also because in online meetings, discussions take naturally longer. This led to the MoP not always managing to cover all its agenda points. In the case of the scientific processes under the SC, scheduled work has been on occasion delayed by the fact that SERAWG, for example, did not receive contributor papers on topics the SC was mandated to consider, so that the topic could not be addressed¹³⁸. However, we note that before even the pandemic restrictions hit, SIOFA CCPs had established a practice of intersessional decision-making not requiring presential meetings, and that this side process has allowed SIOFA to make the time available at MoP presential sessions more efficiently used. As we have discussed in Section 1.4 in relation to the SC's arrangements with its working groups and also in Section 3.1, in relation to the MoP, a discussion on both the use of online tools for meetings, together with a discussion on how to focus agendas of the different bodies so that there is no need to rediscuss topics at subsequent meetings are relevant when perfecting the organisation's planning and scheduling, and despite the constraints imposed by the pandemic's restrictions, some of the practices developed during the COVID years have created opportunities to make the scheduling more efficient, and the time available at presential meetings more efficiently used.

ASSESSMENT

371. There is a general sense of satisfaction with the performance of the Secretariat among stakeholders, and this possibly reflects an acknowledgement of their hard work under limited resources. Until now, it is clear the Secretariat has supported a disproportionate workload compared to available resources. However, the level of available human resources is not the only aspect of this matter. The Panel's perception is that the Secretariat is very constrained in its functions, needing permission from CCPs for many activities which, in other fora, are seen as routine needing little supervision. We believe CCPs are not necessarily on the same page as to the role of the Secretariat in some important aspects of their work, such as its degree of

¹³⁸ See Section 1.5.2, above, for the absence of papers submitted to SC 7 on alfonosinos. Also, Section 1.5.7 on SERAWG's inability to carry out any work prior to SC 6 in 2021 on sharks. Although reports do not mention COVID pandemic factors as a cause for these instances, it is reasonable to assume they did play a role.

autonomy and whether their expertise, for example in legal matters, would be useful in assisting decision-making. We note discussions among CCPs on these issues, notably on the compliance side of business, but miss an in-depth debate about the role of the Secretariat which, we believe, would allow a more agile and efficient operation, possibly with a higher degree of autonomy than it now has. The recruitment of a Compliance Officer is seen by stakeholders as a very necessary and now positive addition to the Secretariat. CCPs should review the situation in one year's time, consider in depth the options developed by the Secretariat in its long-term plan presented to MoP 9 and determine whether the workload is by then tenable by the Secretariat staff.

372. In the meantime, and from a medium-to-long term perspective, SIOFA should seek to promote itself as an attractive employer. This may well be a challenge given the remote location of the Headquarters and the growing scarcity of specialistic expertise in fisheries science, management and legal matters. However, SIOFA might benefit from further engaging with other RFMOs and maritime bodies to join efforts in supporting the development of this expertise, including for instance exchange programs and cooperation with academic institutions world-wide. Capacity building investment in developing States would also help in this regard, as well as promoting a more active participation of experts from developing States in the regular work of SIOFA.
373. CCPs should engage in frank discussions regarding the appointment of officials for all SIOFA bodies. The appointment of an independent SC chair has numerous advantages. However, it also has some downsides. As currently employed, the services requested from the Chairperson, in terms of days remunerated, are in our view not consistent with the workload involved in the position. CCPs should make better efforts either to fund the position appropriately – allowing sufficient remunerated time for the incumbent to effectively discharge his/her duties – or else mobilise national expertise for the post on a voluntary basis. Not doing so would reveal a lack of CCP commitment towards the organisation, incompatible with the duty to cooperate embodied in the Agreement.
374. In any event, and in light of recent experience, SIOFA should consider amending its Rules of Procedure to ensure a longer term for the offices of MoP Chair and Vice-Chairperson in order to ensure better continuity between MoP sessions, including the overseeing of intersessional decision-making.

Nr	Recommendation	Priority (H/M/L)
47	The Panel recommends SIOFA CCPs discuss in depth the strategic plan presented by the Executive Secretary in 2022 but extend their discussions not just to the funding aspects of it, but also to its role. For this purpose, an analysis should be carried out of the Secretariat's degree of autonomy to identify areas where it could be allowed to operate in a more agile way.	M
48	The Panel recommends SIOFA CCPs work towards a clear agreement on the use of consultants – or not – for the offices of subsidiary body chairpersons. Were the decision taken to continue using the current contractual arrangements a robust evaluation of the workload and appropriate funding should be agreed, in order to ensure these offices can be effectively and efficiently discharged.	H
49	The Panel recommends that the term of office of the MoP Chairperson be extended to 2 years at least, to ensure continuity in proceedings.	M/L

Annex I – List of Recommendations, prioritised.

Priorities are indicated as H (high), M (medium) or L (low) or a combination of them. This indication is required by the Terms of Reference for this Review of Performance. The Panel's key criterion in allocating priority relates to the extent to which implementing a given recommendation would result in improving SIOFA's performance, or address what the Panel identifies as particular weak performance areas. The Panel recognizes SIOFA CCPs are fully entitled to decide on the timeframe of the various Recommendations they consider most appropriate. Also, some Recommendations are marked M or M/L in part because action may be underway to address those issues already, or because the Panel understand that their implementation, if accepted, might take some time.

The Section(s)/ Criteria indicated in the last column indicate first the Section of the Report corresponding to the criterion under which the recommendation is issued, and below are listed other Sections/Criteria for which the Recommendation in question is also relevant.

Nr	Recommendation	Prty.	Section(s)/Criteria
0	As a general procedural consideration , the Panel recommends that SIOFA CCPs agree on a clear process for the follow-up of this Performance Review including the following elements: <ol style="list-style-type: none"> 1. A formal decision on which Recommendations are accepted; 2. a plan for implementation with time targets; 3. a regular, periodical review of implementation of such accepted Recommendations; 4. a renewal of the Performance Review process within an appropriate time frame, which we would recommend could be 5 years from now, given the fact this Review is the first such process carried out by the organisation. 	H	All
1	The Panel recommends that the SIOFA SC is tasked with conferring high priority to the improvement of stock assessments in order to reduce uncertainty as a necessary basis for the adoption of harvest strategies. This task should be subject to a target timeline and include a process for an independent peer review of assessment methods and results.	H	1.1 – Status of fisheries resources
2	The Panel recommends that SIOFA CCPs task the Scientific Committee with assessing the status of key shark stocks in the Area and that their status be kept under constant review over the coming years.	H	1.1 – Status of fisheries resources 1.5.7 - associated or dependent species

Nr	Recommendation	Prty.	Section(s)/Criteria
3	The Panel recommends SIOFA CCPs ensure that the fisheries summaries developed by the Scientific Committee contain clear information on the stock status of species caught in the SIOFA Area, and that this information is promptly made available to the general public.	M/L	1.1 – Status of fisheries resources
4	The Panel recommends SIOFA CCPs assess the use of the VME Guide by observers and take action to ensure its use as required, and also implement awareness programmes targeting observers.	M	1.2 – Ecosystem approach
5	The Panel recommends SIOFA CCPs finalise the protocol on VME and protected area designation and speed up the process of progressing the agreed protected areas from their interim nature and identify any further areas in need for protection.	H/M	1.2 – Ecosystem approach
6	The Panel recommends SIOFA CCPs consider capacity building activities for developing States to undertake BFAs as per the SIOFA standards.	M	1.2 – Ecosystem approach 4.5 – Special requirements of developing States
7	The Panel recommends either the deadlines for data submission under relevant CMMs or the schedule of the annual meeting of the Scientific Committee be revised to ensure the SC has the most recent data available ahead of its annual meeting.	H	1.3 – Data collection and sharing 5.2 – Efficiency and cost-effectiveness of resources, meeting scheduling
8	The Panel recommends SIOFA CCPs task the Scientific Committee to develop a long-term strategic plan with identified priorities for its work and options for the use of independent consultants, academic institutions, private/public organisations and/or CCP expertise resources as feasible, taking into account funding requirements.	M	1.4 – Quality and provision of scientific advice 5.1 – Availability of resources
9	The Panel recommends CCPs to launch an exercise of consolidation of the various CMMs into a corpus of SIOFA rules and regulations, with the aim of codifying the applicable rules to make them clearer, easier to interpret and easier to control in terms of compliance. This exercise should identify existing gaps and possible contradictions, issues of interpretation in need of resolving, and a future structure of the corpus that allows the different actors on whom the various obligations fall (from SIOFA's own bodies, to CCP authorities, to fishers) to have a clear and user-friendly access to their applicable rules and discipline.	M	1.5.1 – Adoption of measures

Nr	Recommendation	Prty.	Section(s)/Criteria
10	The Panel recommends SIOFA CCPs undertake the development of a framework for the provision of Scientific Advice that takes into account best international practices, whether or not combined with a framework for decision-making at managerial level in accordance with the Precautionary Approach. This could accompany or complement the already decided work line dedicated to the development of harvest strategies but would provide the basis for an urgent consideration of precautionary measures in the short term.	M	1.5.2 – Precautionary Approach 1.4 – Quality and provision of scientific advice 1.5.5 – Uniform principles across fisheries
11	The Panel recommends SIOFA discusses with CCAMLR concrete options to co-manage toothfish stocks shared between the 2 organisations, and establishes either a prohibition of fishing for this resource outside established toothfish management units or revised the units as required so no activities escape the conservation measures established for this resource.	H	1.5.2 – Precautionary Approach 4.4. – Cooperation with international organisations
12	The Panel recommends SIOFA CCPs to urgently agree on precautionary measures regarding alfonso in light of the significant level of catches, second in the Area by weight, and of the fact that the stocks' biological complexity makes it challenging to adopt measures other than precautionary, at least in the short-to-medium term. Effort and catches should be constrained to the lowest possible levels.	H	1.5.2 – Precautionary Approach 1.5.5 – Uniform principles across fisheries
13	The Panel recommends SIOFA CCPs adopt precautionary measures for target stocks other than the three key stocks of toothfish, orange roughy and alfonso.	H/M	1.5.2 – Precautionary Approach 1.5.5 – Uniform principles across fisheries
14	The Panel recommends SIOFA CCPs engage in discussions towards a future regime for the allocation of fishing rights.	L	1.5.3 – Allocation of fishing rights
15	The Panel recommends SIOFA CCPs agree on a definition of new fisheries and discuss a regulatory framework for new and exploratory fisheries incorporating the highest standards derived from international best practices. The framework should make proper use of tools already developed by SIOFA such as the fishing footprint, BFAs and VME mapping.	H/M	1.5.4 – Unregulated and new and exploratory fisheries
16	The Panel recommends SIOFA CCPs to make every effort to progress from the current interim arrangements for bottom fishing to permanent rules, retaking discussions on this issue from the proposal tabled in 2019 or an updated version of it. Recommendation nr 9 above, on a corpus of SIOFA rules, applies also for the purposes of the issues at stake here.	H	1.5.6 – Conservation of biodiversity and minimisation of impacts 1.5.1 – Adoption of measures

Nr	Recommendation	Prty.	Section(s)/Criteria
17	The Panel recommends the MoP requests from the SC an evaluation of the frequency of VME encounters and of the compliance of fishing vessels with the reporting and move-on rule requirements.	H	1.5.6 – Conservation of biodiversity and minimisation of impacts 1.2 – Ecosystem approach
18	The Panel recommends that SIOFA CCPs expand their consideration of actions aiming at the conservation of biodiversity to fishing activities other than those using bottom gears, extending the concept of Impact Assessment to such activities as well.	M	1.5.6 – Conservation of biodiversity and minimisation of impacts 1.2 – Ecosystem approach
19	The Panel recommends SIOFA CCPs to agree urgently on measures to reduce shark by-catches, in particular by implementing any mitigation measures that identified as effective by the 2023 specific workshop on sharks to take place under the aegis of the Scientific Committee, including precautionary catch limits for Portuguese dogfish. Recommendation nr 2 on the assessment of the status of shark stocks is also relevant for the issues discussed under this criterion.	H	1.5.7 – Associated or dependent species 1.2 – Ecosystem approach
20	The Panel recommends the SC effectively use the focused agenda item on seabird by-catch, decided by SC 8 in 2023 for future sessions, to identify necessary by-catch mitigation measures, including in trawl fisheries, as originally proposed at the time CMM 13 was adopted. SIOFA's cooperation arrangements with ACAP, but also with CCAMLR, should be strengthened including for the purposes of this work.	M/L	1.5.7 – Associated or dependent species 1.2 – Ecosystem approach
21	The Panel recommends SIOFA carries out a review of the effect of effort limits applicable to relevant fleets to determine whether such limits constrain the fishing activity or not, and that a clear determination is made on the potential use of capacity or effort limits as a fishery management tool, especially with regard to fisheries conducted with gears other than bottom gears.	M	1.6 – Capacity management
22	The Panel recommends SIOFA CCPs consider incorporating the principles of a flag State performance self-assessment into their compliance monitoring scheme, including by tasking the CC with reviewing the annual national reports submitted by CCPs and currently reviewed only by the SC.	H/M	2.1 – Flag State duties
23	The Panel recommends SIOFA CCPs consider the adoption of binding application of the Port Inspection Scheme to all ports of every CCPs, without the condition to apply to those having areas of national jurisdiction adjacent to the Agreement Area.	H/M	2.2 – Port State measures
24	The Panel recommends SIOFA adopts at least a minimum standard regarding inspection coverage of all fishing vessels carrying or landing resources of its competence which enter their ports.	H	2.2 – Port State measures

Nr	Recommendation	Prty.	Section(s)/Criteria
25	The Panel recommends SIOFA CCPs investigate possible landings or transshipments of SIOFA species at ports placed under the jurisdiction of non-CCPs, and if this is found to happen, initiate demarches with the relevant port States to request they become CCPs or cooperate with SIOFA as appropriate.	H	2.2 – Port State measures
26	The Panel recommends and encourages SIOFA CCPs to continue their efforts to agree on a SIOFA VMS in order to verify vessels activity in the Agreement Area. The Panel also recommends that CCPs adopt rules for the submission VMS data until such scheme is adopted.	H/M	2.3 – MCS measures 1.5.1 – Adoption of measures
27	The Panel recommends SIOFA CCPs urgently seek to clarify the various issues of interpretation affecting the implementation of several MCS measures, in particular those related to CMM 06 on the IUU vessel list, CMM 07 on Vessel authorisation and CMM 14 on the HSBI procedures, including by seeking independent legal or technical advice if necessary.	H	2.3 – MCS measures 1.5.1 – Adoption of measures
28	The Panel recommends including in the agenda of the Compliance Committee a specific standing item on follow-up actions in the framework of the CMS for the previous year or years.	H	2.4 – Follow-up on infringements
29	The Panel recommends SIOFA CCPs agree on a review of CMM 11 on a Compliance Monitoring Scheme in order to facilitate its interpretation, taking into account the changes proposed by this Panel, including to the CCR template and the rules regarding follow up action on infringements identified in previous years.	H/M	2.5 – Cooperative mechanisms to detect and deter non-compliance
30	The Panel recommends SIOFA CCPs task the Secretariat with an assignment as high priority for the Compliance Officer the strengthening of the Secretariat's technical capacity to examine, analyse and verify the data collected for the purposes of the Compliance Monitoring Scheme.	H/M	2.5 – Cooperative mechanisms to detect and deter non-compliance
31	The Panel recommends that SIOFA CCPs task the Secretariat to assess the capacity building needed in order to improve implementation of their obligations by the CCPs, prioritizing the most urgent and providing options to ensure appropriate assistance is provided to CCPs which so require.	M	2.5 – Cooperative mechanisms to detect and deter non-compliance 4.5 – Special requirements of developing States
32	The Panel recommends SIOFA CCPs discuss the possible adoption of a new measure on a Catch Documentation Scheme, focusing, in particular, on CCAMLR's DCD, and explore options for its implementation. The Panel recommends SIOFA strengthens its cooperation with CCAMLR in this regard, including by requesting capacity building support for the Secretariat so that it can contribute to future joint work by the two organisations.	H/M	2.6 – Market-related measures 4.4. – Cooperation with international organisations

Nr	Recommendation	Prty.	Section(s)/Criteria
33	The Panel recommends SIOFA CCPs consider the option of developing a SIOFA Reporting Manual to replace the present table of reporting requirements provided for in the organisation's website. Suggestions as to the structure and contents have been provided in our assessment under this criterion.	M	1.7 and 2.7 – Reporting requirements
34	The Panel recommends SIOFA CCPs consider the option of establishing an IT-based data management platform taking into account the experience gained in the design and use of such platforms in other organisations, including in-built protocols for data verification, quality checks and the protection of confidential data. A decision to explore this option should only be taken if CCPs accept and assume the need for investment on capacity building as required.	H	1.7 and 2.7 – Reporting requirements 1.3 – Data collection and sharing 4.5 – Special requirements of developing States
35	The Panel recommends, in case SIOFA CCPs are not prepared to implement an IT data platform as per Recommendation nr 34, urgent action is taken to ensure appropriate data verification protocols and quality checks are established.	H	1.7 and 2.7 – Reporting requirements 1.3 – Data collection and sharing
36	The Panel recommends SIOFA CCPs agree to share data regarding the implementation of their fisheries control obligations and utilise such data in the framework of CMM 11's Compliance Monitoring Scheme in order to assess whether SIOFA's control-related measures are effectively implemented.	H/M	1.7 and 2.7 – Reporting requirements
37	The Panel recommends SIOFA CCPs consider strengthening the use of intersessional decision procedures or inter-sessional working groups to facilitate the work of SIOFA as appropriate, in order to focus MoP discussions and make better use of the time available.	M/L	3.1 – Decision-making
38	The Panel encourages SIOFA CCPs to continue and if needed intensify dialogue on matters of concern to different CCPs, where consensus has not been achieved in order to find a common view which can be satisfactory to all CCPs. In particular, the Panel recommends to address bottom fishing activities in the Saya de Malha Bank, the scope of boarding and inspection procedures under CMM 14 and the issue of managing overlapping obligations for vessels arising from both SIOFA and neighbouring RFMOs, in particular the IOTC.	M	3.2 – Dispute settlement
39	The Panel recommends SIOFA CCPs continue to review, clarify and amend as appropriate the relevant data rules or provisions so that all CCPs as well as observers and the general public have better access to data and information for the purpose of discussion and decision-making.	M	4.1 - Transparency

Nr	Recommendation	Prty.	Section(s)/Criteria
40	The Panel recommends SIOFA CCPs task the Secretariat to review the documents and materials on the SIOFA website and make necessary tunings in accordance with any new data rules on dissemination and any relevant decisions of the MoP.	M	4.1 - Transparency
41	The Panel recommends SIOFA CCPs engage in discussion on the rules, standards and procedures regarding the granting of CNCP status, including the clarification of the requirements for admission or CNCPs status renewal, in order to ensure a consistent reviewing approach. The adoption of clear rules as well as an application template is also recommended, providing CNCP with general instructions on the required information, actions, and any other criterion.	M	4.2 – Relationships with CNCPs
42	The Panel recommends SIOFA CCPs consider strengthening cooperation with the IOTC, SWIOFC, SEAFO, SPRFMO, and CCSBT, as appropriate.	H	4.4 – Cooperation with international organisations
43	The Panel recommends SIOFA CCPs include a prerequisite in their consideration of CMM new or amended proposals the review of relevant measures adopted by neighbouring international organizations in order to promote a coherent approach and compatibility of fisheries management across RFMO boundaries.	M	4.4 – Cooperation with international organisations
44	The Panel recommends SIOFA CCPs consider setting up a section on the SIOFA website dedicated to SIOFA's implementation of Article 13 of the Agreement, presenting the assistance that may be provided individually or collectively by CCPs to meet the special requirement of CCP developing States including, in particular, the least developed among them, and small island developing States.	M	4.5 – Special requirements of developing States
45	The Panel Recommends that SIOFA CCPs agree on a periodical review by the MoP of the organisation's implementation of Article 13 of the Agreement and encourage CCP developing States to proactively express their needs, challenges and special requirements affecting their contribution to SIOFA's work. The MoP may thereafter consider establishing a fund dedicated to these purposes or expanding the scope of the current one.	M/L	4.5 – Special requirements of developing States
46	The Panel recommends SIOFA CCPs urgently agree on a strategic financial planning for the medium term taking into account the costs incurred over recent years for the funding of the Scientific Committee work, and commit to a fairer sharing of these costs, including by contributing in kind CCP scientific resources.	H/M	5.1 Availability of resources for activities

Nr	Recommendation	Prty.	Section(s)/Criteria
47	The Panel recommends SIOFA CCPs discuss in depth the strategic plan presented by the Executive Secretary in 2022 but extend their discussions not just to the funding aspects of it, but also to its role. For this purpose, an analysis should be carried out of the Secretariat's degree of autonomy to identify areas where it could be allowed to operate in a more agile way.	M	5.2 – Efficiency and cost-effectiveness
48	The Panel recommends SIOFA CCPs work towards a clear agreement on the use of consultants – or not – for the offices of subsidiary body chairpersons. Were the decision taken to continue using the current contractual arrangements a robust evaluation of the workload and appropriate funding should be agreed, in order to ensure these offices can be effectively and efficiently discharged.	H	5.2 – Efficiency and cost-effectiveness
49	The Panel recommends that the term of office of the MoP Chairperson be extended to 2 years at least, to ensure continuity in proceedings.	M/L	5.2 – Efficiency and cost-effectiveness

Annex II – Summary of Stakeholder input

Section 4 of this Report provides an account of the process followed to request and receive stakeholder input. We summarise the key points made by stakeholders in response to the Questionnaire sent by the Review Panel, including both from qualitative input and our analysis of the replies received to the Questionnaire's section in which stakeholders were asked to rank their degree of satisfaction with SIOFA's performance in respect of each of the Assessment Criteria and Sub-criteria adopted by the Meeting of the Parties for this Review.

The Questionnaire, as sent to stakeholders via a SIOFA Circular, is also included at the end of this Annex.

1. Qualitative comments

In response to this part of the questionnaire, stakeholders provided views on SIOFA's achievements and challenges to date, on what they see as future challenges in the short and medium terms, and on strengths and weaknesses of the organisation from a functional point of view.

1.1. SIOFA's achievements

With regard to SIOFA's achievement to date, there is almost unanimity among stakeholders that the key achievement of SIOFA since its inception has been the adoption of the standing set of Conservation and Management measures. SIOFA has been able to do this despite the challenges any multilateral organisation may face to reach agreement on a set of measures at its formative stage, when membership is still evolving. Stakeholders value positively the way in which voluntary interim measures for bottom fishing and the protection of VMEs in the Area, adopted together with the Agreement itself in 2006, signalled a shared commitment among CCPs for sustainability in the Area and paved the way for the measures in force today. However, some stakeholders regret that it has not been possible so far to progress from interim measures to permanent ones with regard to bottom fisheries, these being the main focus of SIOFA's work to date.

The set of MCS measures adopted by SIOFA is also seen as a significant achievement for a young and small organisation, compared to the history of other RFMOs which took much longer to reach the same levels of control and enforcement regulation for much larger fisheries. The adoption, in particular of a High Seas Boarding and Inspection regime is seen in itself as a significant achievement, even if most stakeholders agree that there are issues to be resolved when it comes to its implementation in the field.

Stakeholders value positively the good spirit of cooperation among CCPs, which at least in part stems from the organisation's small size. It allows close regular contacts among CCPs and between them and the Secretariat, fostering a good working environment during proceedings and intersessional periods.

1.2. Challenges faced by SIOFA to date

With regard to SIOFA's challenges faced to date, there is general consensus on data deficiencies as a major problem, preventing better progress in the management of the fisheries conducted in the Area. Key factors cited as underlying this problem are the absence of historical data, the lack of clarity – and, for some respondents, robustness – of SIOFA's rules on data confidentiality, lack of capacity in some CCPs to collect and submit data of sufficient quality, lack of robust mechanisms for the verification of the data and the Secretariat's burden to try to deal with inconsistencies and gaps under limited resources.

There is also general consensus on the difficulties SIOFA encounters when implementing its compliance review process. Its existence is an achievement in itself. However, stakeholders believe that the compliance report SIOFA considers and adopts annually needs improvement. In particular, the categories of compliance status for CCPs used in the review are not always seen as fairly and consistently implemented. Concerns are also raised about the lack of real avenues for follow-up and the taking of corrective action in case of non-compliance. In part, the role of the Secretariat in this process is mentioned as a factor, inasmuch as for some respondents, it is not able to provide an authoritative interpretation of the rules contained in the CMMs, whether due to limited resources or due to dissent among CCPs themselves on the scope of its role within the organisation. Altogether, these issues reveal that the process is not seen by all stakeholders, as of yet, as being conducted in a satisfactory manner.

Another significant challenge pointed out by stakeholders lies in the fact that several RFMOs concur to regulate fishing in the Area, or for stocks of same species in neighbouring Areas, with which SIOFA needs to establish appropriate coordination. Cumulative requirements in the case of vessels operating under cumulative SIOFA and IOTC control rules are seen as a real problem for the fishing industry, whereas good but improvable coordination with CCAMLR for the management of toothfish stocks in the SIOFA Area is also mentioned among key challenges faced and still to resolve. On the latter point, for example, the absence of market measures in SIOFA points at CCAMLR's *Dissostichus* Catch Document as being in need of a corresponding mechanism for toothfish stocks harvested in the SIOFA Area, but some respondents believe catch documents should be established for all SIOFA key species as a matter of priority.

Last but by no means least, for the purposes of this summary, it is worth noting the concerns expressed by several respondents regarding an, at least perceived, lack of CCP engagement in the workings of SIOFA. According to them, SIOFA's performance suffers from differing levels of commitment and proactiveness among the membership towards the workings of the organisation. In addition, several Coastal States with EEZs bordering the Area have chosen not to become parties or cooperating non-parties to the Agreement.

1.3. Future challenges

With regard to the challenges that SIOFA will need to meet in the short and medium-term, stakeholders identify most of the challenges faced to date as also the ones the organisation will need to face in the near future, as most are still unresolved. Cooperation with other RFMOs, data deficiency issues, the compliance review process, the need to reinforce the membership and the need to ensure CCP commitment towards the work of the organisation, especially in terms of contributing human resources towards the work of the SC are the main issues that come back in many replies under this heading. Specific issues are also mentioned by several respondents. The setup and operation of a regional VMS for SIOFA is seen as a significant challenge, in light of unsuccessful recent efforts to find agreement among CCPs on past proposals for such a system. The definition of the bottom fishing footprint in the Area is also mentioned, as some respondents seem to think the work done so far is satisfactory but others believe it is insufficient and needs completion. Establishing a framework for the regulation of exploratory fisheries in the Area is also seen as a challenge needing focus in the near future by some respondents.

Finally, some respondents, however, mention challenges of a more global nature such as climate change and the organisation's response to the calls made by the UN General assembly for States and RFMOs to protect the deep-sea environment from destructive impacts by bottom fishing. In the case

of SIOFA, several stakeholders see a key challenge in the need for the organisation to progress from the interim measures in place to more permanent and robust ones.

1.4. SIOFA's strengths and weaknesses as an organisation

Finally, with regard to the strengths and weaknesses of the organisation from a functional point of view, stakeholders generally agree that SIOFA's small size has the benefit of rendering organizational aspects of the work more flexible in a cooperative spirit. They value the Secretariat's commitment in this regard. This also contributes the organisation's ability to utilise efficiently the intersessional period, including for decision-making, possibly to a greater extent than other, larger RFMOs. Respondents are generally satisfied with the running of meetings, but there are opposing views among stakeholders on whether the use of independent chairpersons for the SC and working groups is a positive organisational approach or one that should be rendered unnecessary if CCPs were better ready to contribute their own resources and expertise.

As for the areas where stakeholders see a need to reinforce the functioning of the organisation, many respondents cite the need for a robust IT data infrastructure in the Secretariat, as a means to resolving issues of data verification for completeness (addressing gaps), quality and consistency, and facilitating user-friendly access and efficient processing, while ensuring storage security and confidentiality. Both access by stakeholders, as well as dissemination of information by the Secretariat would be improved with a better use of the SIOFA website, which for some needs to be brought up to more recent standards. Some respondents believe that the Secretariat's human resources should be further reinforced. Even if recent recruitments are seen as significant progress in this regard, some respondents would like to see the Secretariat's capacity to produce budgets and workplans reinforced. Other issues mentioned by stakeholders as being in need of reinforcement relate to the organisation's ability to network more regularly with other RFMOs and the provision of assistance for capacity building so that all CCPs can fully engage in SIOFA's working irrespective of their development status. The issue of funding for this purpose, as well as for scientific research and other areas of SIOFA's operation is also mentioned by some respondents.

2. Degree of stakeholder's satisfaction with SIOFA's performance relative to assessment criteria

The Questionnaire included a table where respondents were invited to share their perception about SIOFA's performance by ranking their degree of satisfaction in respect to each of the assessment criteria and sub-criteria agreed by the Organisation for this Review process. The table included at the end of this Section shows the aggregated rankings per sub-criterion. The numbers of replies received (10), may be relatively representative of SIOFA's small size in terms of its membership and observer participation, but it is in itself too low to make a statistical frequency analysis of replies particularly informative. Nevertheless, the table allows what the Panel believes is a useful basic analysis on where balances and leanings lie in respect of the assessment criteria among stakeholders. It allows, for instance, directing focus towards issues about which stakeholders hold significantly differing views on the organisation's performance, which the Panel considers a particularly important element. As for issues on which respondents tend to agree, making progress to overcome any difficulties or improve on that which is already considered good progress is relatively easier. The results of our analysis by areas and general assessment criteria are summarised below for each of the 5 Assessment Areas under Review.

2.1. Assessment Area 1 – Conservation and management

- *Status of fisheries resources*: moderate satisfaction levels among respondents can be noted. In the case of the sub-criterion on stocks status trends, there is a strong positioning around the neutral rank of “neither satisfied nor dissatisfied”. Only 2 respondents placed themselves in the negative rankings for this criterion.
- *Ecosystem Approach*: views are quite divided on whether SIOFA uses the Approach to satisfaction, but there are more respondents ranking SIOFA’s performance on the positive side than in the negative, although not by much.
- *Data collection and sharing*: most respondents are satisfied with the framework set up by SIOFA to deal with data. However, there are evident issues around its implementation, particularly regarding CCPs’ performance in collecting, sharing and ensuring completeness and accuracy of the data, as well as timely submission. With regard to SIOFA’s work on data as an organisation, including the resolution of detected gaps, views are varied, even though positive to neutral rankings prevail.
- *Quality and provision of scientific advice*: there is a rather strong prevalence of positive rankings of satisfaction. Although not unanimous, most SIOFA stakeholders seem to believe the Scientific Committee works well, but outliers point at the crucial question of whether the advice itself, while being the best available, is good enough or wanting.
- *Adoption of conservation and management measures*: in line with the qualitative input received, there is a predominant positive ranking of satisfaction with SIOFA’s CCM output. Responses also lean, with outliers, towards the positive side of the scale regarding SIOFA’s implementation of Article 6(2)-(4) of the Agreement (regarding the adoption of a system of quota allocations for catch and effort). The same applies to SIOFA’s performance in taking into account the need to conserve marine biological diversity and in adopting measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target fishery resources, and impacts on associated or dependent species. Satisfaction decreases, however, with regard to SIOFA’s implementation of the Precautionary Approach, with regard to its ability to ensure consistency in applying management principles and procedures to all fisheries under its purview, and ever more so with regard to the adoption of CMMs for previously unregulated fisheries, including new and exploratory fisheries. Views on these three aspects are quite mixed and in the case of the last cited, they lean towards the negative side of the scale. What emerges from the input received concerning this criterion is that despite the value seen in the current set of standing CMMs, stakeholders feel a need for their improvement in terms of consistency, precautionary standards, and limited scope of fisheries under regulation.
- *Capacity management*: there is a majority of respondents satisfied with SIOFA’s identification of appropriate capacity levels, but only a very slight one. One of the respondents ranks in the very dissatisfied extreme and no respondent places itself in the neutral zone of the scale. This is indicative of a significant divide among stakeholders on this issue. Dissenting views also prevail regarding the other sub-criteria under this criterion. Stakeholders do not agree on their perception of SIOFA’s performance regarding either action taken to prevent overcapacity or to monitor capacity and effort levels.
- *Reporting Requirements*: this is another issue on which perceptions are widely spread across the scale, with a slight predominance of dissatisfaction. This spread may result from three different perceptions. For some, SIOFA’s reporting requirements related to work on

conservation and management (those that feed into the scientific assessment work) may seem sufficient, for others insufficient and still for others excessively burdensome.

2.2. Assessment Area 2 – Compliance and enforcement

- *Flag State duties*: respondents are mostly satisfied with the performance of CCPs as flag States.
- *Port State measures*: a strong majority of respondents signal satisfaction with the measures adopted by SIOFA, but views become more nuanced with regard to their implementation. It is noteworthy that no respondent placed itself on the negative rankings side for this criterion.
- *Monitoring, control and surveillance*: here too, respondents tend to aggregate on the positive side of the ranking for both SIOFA’s performance in adopting the standing measures as well as for the extent to which these measures are effectively implemented, with only one respondent ranking on the negative side of the scale for the latter sub-criterion.
- *Follow-up on infringements*: views are divided, with a very slight predominance of positive performance perceptions.
- *Cooperative mechanisms to detect and deter non-compliance*: respondents tend to aggregate on the positive side or rankings, with only one on the negative side, when considering the mechanisms SIOFA has put in place. Views become thoroughly mixed with regard to their implementation.
- *Market-related measures*: views on SIOFA’s action in this field are reserved, presumably due to SIOFA having adopted no market-related measures as of yet. Respondents place themselves either in the neutral ranking of satisfaction or in the NA column. Only one respondent ranked on the negative concerning this criterion, which could be reasonably inferred as dissatisfaction with SIOFA’s lack of action.
- *Reporting Requirements*: this is the criterion in the compliance and enforcement area where the lowest levels of satisfaction among the respondents is observable. However, as many as 4 respondents chose an NA reply for this sub-criterion. This makes stakeholder input in relation to this sub-criterion difficult to interpret.

2.3. Assessment Area 3 – Decision-making and dispute settlement

- *Decision-making*: views are mixed but leaning towards the positive side regarding the three sub-criteria at stake, especially with regard to the consistency and transparency of SIOFA’s decision-making processes, with 3 out of the 10 respondents ranking very satisfied.
- *Dispute settlement*: 4 respondents did not take a view on this criterion, choosing an NA reply. The rest is divided towards the extremes, with those on the positive side being predominant 2 to 1 over those expressing dissatisfaction with the status quo. An abundance of NA replies could be reasonably interpreted as reserving one’s views until a dispute arises and the adequacy of any mechanism used to resolve it can be tested, be it the dispute settlement provisions in the Agreement or additional formal or informal mechanisms agreed by CCPs to supplement them. This is a complex issue with discordant extreme views and many reserved positioning. In Section

X below, the Panel discusses the possible factors that underlie the differences observed in the stakeholder's input received.

2.4. Assessment Area 4 – International cooperation

- It is relatively easy to summarise our analysis for this whole area, as views are generally concurring and positive regarding the assessment criteria on transparency, relationships with CNCPs, relationship with non-CCPs undermining the objectives of the Agreement and cooperation with international organisations. Save one or two respondents, rankings aggregate in the neutral to positive degrees of satisfaction with SIOFA's performance. Views are rather more mixed, however, when it comes to the criterion regarding the special requirements of developing States. They spread across the whole scale, from very dissatisfied to very satisfied and one NA reply, even if they are predominant in the neutral zone of the scale. This reveals a remarkable range of expectations among respondents regarding this particular issue.

2.5. Assessment Area 5 – Financial and administrative issues

- Similar to the previous area, stakeholder views are here rather concurring in respect of SIOFA's performance. A significant majority of respondents indicate satisfaction with SIOFA's management of its human and financial resources, including those of the Secretariat, and with the financial and other resources made available to SIOFA. However, the picture arising from the input received here has to be considered with due care, in light of the importance of voluntary contributions for SIOFA's operation. The matter is discussed in detail in Section 5 of the Report.

Criteria for reviewing the performance of SIOFA – Stakeholder’s input

Questionnaire replies received: 10 complete – 1 partial

- 1 = Very dissatisfied
- 2 = Dissatisfied
- 3 = Neither satisfied or dissatisfied
- 4 = Satisfied
- 5 = Very satisfied
- NA= No views/Not applicable

Number of responses

0	1	2	3	4	5	6	7	8

Area	General criteria	Detailed criteria	1	2	3	4	5	N	
1. Conservation and management	Status of fisheries resources	Status of fisheries resources under the purview of SIOFA							
		Trends in the status of those resources							
		Status of species that belong to the same ecosystems as, or are associated with or dependent upon, targeted fisheries resources							
	Ecosystem approach	Extent to which SIOFA decisions take account of and incorporate an ecosystem approach to fisheries management							
	Data collection and sharing	Extent to which SIOFA has agreed formats, specifications, and timeframes for data submissions							
		Extent to which SIOFA CCPs, individually or through SIOFA, collect and share complete and accurate data concerning fishery resources and other relevant data in a timely manner							
		Extent to which fishing, and research data and fishing vessel and research vessel data are gathered by SIOFA and shared among CCPs							
		Extent to which SIOFA is addressing any gaps in the collection and sharing of data as required							

Area	General criteria	Detailed criteria	1	2	3	4	5	N
	Quality and provision of scientific advice	Extent to which SIOFA receives and acts on the basis of the best scientific advice relevant to the fisheries resources under its purview, as well as to the effects of harvesting, research, conservation and associated activities on the marine ecosystem						
		Extent to which the structure, processes, procedures and expertise of the Scientific Committee and the Secretariat meet the needs and resources of SIOFA and the data and technical requirements of the most recent modelling platforms						
	Adoption of conservation and management measures	Extent to which SIOFA has adopted Conservation and Management Measures (CMMs) for fisheries resources that ensure the long-term conservation and sustainable use of those resources and are based on the best scientific evidence available						
		Extent to which SIOFA has applied precautionary approach as set forth in Article 4(c) of the Convention and the Code of Conduct of Responsible Fisheries Article 7.5, including the application of precautionary reference points						
		Extent to which SIOFA has followed the criteria established under Article 6(2)-(4) of the Agreement, in the adoption of measures for the allocation of total allowable catch or total allowable fishing effort						
		Extent to which SIOFA has moved towards the adoption of CMMs for previously unregulated fisheries, including new and exploratory fisheries						
		Extent to which SIOFA applies uniform principles and procedures to all fisheries resources under its purview						
		Extent to which SIOFA has taken due account of the need to conserve marine biological diversity and minimise adverse impacts of harvesting, research, conservation and associated activities on fishery resources and its marine ecosystems						
		Extent to which SIOFA has adopted measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target fishery 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						
	Capacity management	Extent to which SIOFA has identified fishing capacity levels commensurate with the long-term conservation and sustainable use of fishery resources						
		Extent to which SIOFA has taken actions to prevent or eliminate excess fishing capacity and effort						
		Extent to which SIOFA monitors the levels of fishing effort						

Area	General criteria	Detailed criteria	1	2	3	4	5	N
1. Conservation and management <i>(Ctd.)</i>	Reporting Requirements	Analysis of SIOFA's reporting requirements to improve efficiency, avoid redundancy and reduce unnecessary burden to CCPs						
2. Compliance and enforcement	Flag State duties	Extent to which SIOFA CCPs are fulfilling their duties as flag States under Article 11 of the Agreement, pursuant to CMMs adopted by SIOFA and under other international instruments, including, inter alia, the 1982 Law of the Sea Convention, the 1995 Agreement and the 1993 FAO Compliance Agreement, as applicable						
	Port State measures	Extent to which SIOFA has adopted measures relating to the exercise of the rights and duties of its CCPs as port States, including under Article 12 of the Agreement, the Code of Conduct for Responsible Fisheries and the FAO Port States Measures Agreement, as applicable						
		Extent to which these measures are effectively implemented						
	Monitoring, control and surveillance	Extent to which SIOFA has adopted integrated Monitoring, Control and Surveillance (MCS) measures (e.g., record of vessels, VMS, inspections in port and at sea, regulation of transshipment, market-related measures, fight against IUU fishing, etc.)						
		Extent to which these MCS measures are effectively implemented						
	Follow-up on infringements	Extent to which SIOFA and its CCPs follow up on non-compliance with CMMs						
	Cooperative mechanisms to detect and deter non-compliance	Extent to which SIOFA has established adequate cooperative mechanisms to monitor compliance, detect and deter non-compliance, and remedy compliance issues (e.g. compliance committees, IUU vessel lists, sharing of information about non-compliance)						
		Extent to which these mechanisms are being utilised effectively						
	Market-related measures	Extent to which SIOFA has adopted measures relating to the exercise of the rights and duties of CCPs as market States for SIOFA fishery resources						
	Reporting Requirements	Analysis of SIOFA's reporting requirements to improve efficiency, avoid redundancy and reduce unnecessary burden to CCPs.						
	Decision-making	Efficiency of Meetings of the Parties, meetings of its subsidiary bodies and working groups (including intersessional working groups) in addressing critical issues in a timely and effective manner						

Area	General criteria	Detailed criteria	1	2	3	4	5	N
3. Decision-making and dispute settlement		Extent to which SIOFA has transparent and consistent decision-making procedures that facilitate the adoption of CMMs and decisions in a timely and effective manner						
		Existence of an informal mechanism of cooperation between CCPs based on reciprocities						
	Dispute settlement	Extent to which SIOFA has established adequate mechanisms for resolving disputes						
4. International cooperation	Transparency	Extent to which SIOFA is operating in a transparent manner, taking into account Article 14 of the Agreement and the Code of Conduct for Responsible Fisheries						
		Extent to which SIOFA decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion						
	Relationship with CNCPs	Extent to which SIOFA facilitates cooperation between Contracting Parties and CNCPs including through encouraging CNCPs to become Contracting Parties or to implement voluntarily SIOFA CMMs						
	Relationship with non-CCPs undermining the objectives of the Agreement	Extent to which SIOFA provides for action in accordance with international law against non-CCPs undermining the objectives of the Agreement, as well as measures to deter such activities, as well as encouraging them to become Contracting Parties and CNCPs or to implement voluntarily SIOFA CMMs						
	Cooperation with international organisations	Extent to which SIOFA cooperates with other international organisations, including under Article 16 of the Agreement						
	Special requirements of developing States	Extent to which SIOFA recognises the special requirements of developing States, in particular the least development among and small island developing States, and pursues forms of cooperation with developing States, including under Article 13 of the Agreement and the Code of Conduct for Responsible Fisheries						
		Extent to which SIOFA CCPs, individually or through the Meeting of the Parties, provide relevant assistance to developing States						

Area	General criteria	Detailed criteria	1	2	3	4	5	N
5. Financial and administrative issues	Availability of resources for activities	Extent to which financial and other resources are made available to achieve the aims of SIOFA and to implement SIOFA's decisions						
	Efficiency and cost-effectiveness	Extent to which SIOFA is efficiently and effectively managing its human and financial resources, including those of the Secretariat						
		Extent to which the schedule and organisation of the meetings could be improved						

TERMS OF REFERENCE

Performance Review of SIOFA

Article 13 of the 1995 United Nations Fish Stocks Agreement (UNFSA) provides that *“States shall cooperate to strengthen existing subregional and regional fisheries management organizations and arrangements in order to improve their effectiveness in establishing and implementing conservation and management measures for straddling fish stocks and highly migratory fish stocks”*.

United Nations General Assembly (UNGA) Resolution 61/105 of 8 December 2006 called for performance reviews to be undertaken of all Regional Fisheries Management Organisations and arrangements. Performance reviews have also been called for in the UNFSA Review Conferences in 2006 and 2010 and the 14th round of informal consultations of States Parties to the UNFSA, where performance reviews were a dedicated topic.

More recently, UNGA Resolution 76/71 recognises that performance reviews have proven to be an effective tool for strengthening performance of regional fisheries management organizations and arrangements, and calls for those organisations that have not done so to undertake performance reviews as a matter of urgency.

As 2022 will mark the 10th anniversary of the entry into force of the SIOFA Agreement and therefore ten years of operation of SIOFA, it is appropriate to assess the performance of the organisation to ensure that it achieves the objectives set out in Article 2 of the Agreement, notably to ensure the long-term conservation and sustainable use of the fishery resources in the Area through cooperation among the Contracting Parties, and to promote the sustainable development of fisheries in the Area, taking into account the needs of developing States bordering the Area that are Contracting Parties to the Agreement, and in particular the least developed among them and small-island developing States.

These Terms of Reference set out the process for conducting the first performance review of SIOFA.

Performance review

1. A performance review of SIOFA shall be conducted during the 2022-2023 intersessional period and the final report shall be submitted prior to the 10th Meeting of the Parties for its consideration at that meeting.
2. An independent Performance Review Panel (Review Panel) shall be appointed in accordance with the procedures set out in points 4 to 9 below to carry out the performance review. Panel members shall be independent and participate in their personal capacity. Their expertise should cover collectively the relevant areas of science, fisheries and marine ecosystems management and international legal and governance matters, including compliance and enforcement issues and combatting illegal, unreported and unregulated (IUU) fishing.
3. The review shall be carried out on the basis of the list of criteria in Annex 1. The Review Panel may consider adding criteria, if needed.

Performance Review Panel composition and Chair

4. The Review Panel shall be composed of four persons as follows:
 - a. Two experts who are nationals of SIOFA Contracting Parties or Participating Fishing Entities with experience in the SIOFA context and a thorough understanding of the SIOFA Agreement and Conservation and Management Measures (CMMs).
 - b. Two external experts, among whom there is experience in relevant areas of science, fisheries and marine ecosystems management and international legal

and governance matters, including compliance and enforcement issues and and combatting IUU fishing. The external experts shall not be officers or officials of SIOFA, or be directly involved in SIOFA matters on behalf of CCP authorities to SIOFA at the time of appointment or while the performance review is being conducted.

5. The Chairperson of the Review Panel shall be a Review Panel member selected by the Review Panel.

Selection of the Review Panel members

6. SIOFA Contracting Parties and Participating Fishing Entities may provide in writing two names, one for each category, to the Chairperson of the Meeting of the Parties, through the Secretariat, by 31 July 2022. Contracting Parties and Participating Fishing Entities should confirm the availability of their nominees before they are proposed. The submission shall include a CV and a short presentation of each candidate.
7. The Chairperson of the Meeting of the Parties, through the Secretariat, shall provide to the Contracting Parties and Participating Fishing Entities, by 15 August 2022, two lists containing the names proposed for the appointment of the four experts.
8. SIOFA Contracting Parties and Participating Fishing Entities shall immediately acknowledge receipt of the communication. Contracting Parties and Participating Fishing Entities may respond in writing to the Chairperson of the Meeting of the Parties, through the Secretariat, within 30 days indicating their vote for two persons from each list. In case of a tie between two or more candidates from the same list, a run-off shall immediately be run for those candidates. SIOFA Contracting Parties and Participating Fishing Entities shall reply to the communication from the Chairperson of the Meeting of the Parties with the list of tied candidates within 15 days indicating their vote for one person from the list/s.
9. The Chairperson of the Meeting of the Parties, immediately after the end of the 30-day period, or the additional 15-day period in case of a run-off, shall, through the Secretariat, inform SIOFA Contracting Parties and Participating Fishing Entities of the result of the selection process.
10. Once the persons with the highest votes have been identified, the Secretariat shall write to each person selected for appointment to the Review Panel, indicating SIOFA's desire to appoint them, requesting their commitment to comply with these Terms of Reference and seeking their positive response within 10 days.
11. The Secretariat shall inform Contracting Parties and Participating Fishing Entities of the final composition of the Review Panel.

Review Panel functions and tasks

12. At the latest by 15 October 2022, the Review Panel shall appoint a Chairperson among its members by consensus.
13. The Review Panel shall conduct its work in English. The Review Panel may conduct its work in-person and virtually and shall meet at least once in person in La Réunion, France, unless a more cost-effective location is identified at a date convenient to all Panel members. If the international sanitary situation makes it impossible to meet in person, the Review Panel meetings shall take place in virtual format.
14. The Review Panel shall determine its own mode of operation for conducting the performance review and for preparing its report, noting that the review shall include a desktop study with questionnaires and interviews, carried out in support of this work, addressed to all SIOFA CCPs, and those international organisations and non-governmental organisations that have participated in the Meetings of the Parties as observers. All CCPs and observers are encouraged to participate in the questionnaires and interviews.
15. The Review Panel shall decide by consensus including the adoption of the report. In the event consensus cannot be reached, individual members of the Panel may include their views in the

Panel's report. The Panel may consider the use in the report of the terminology proposed in Annex 2.

16. The report including the recommendations of the Performance Review shall be communicated by the Panel Chairperson, through the Secretariat, to SIOFA CCPs, the Chairperson of the Meeting of the Parties and the Secretariat no less than 60 days in advance of the 10th Meeting of the Parties.
17. The Chairperson of the Review Panel shall present the Panel's report to the 10th Meeting of the Parties and respond to questions from CCPs concerning the report.
18. The final report and the conclusions of the Meeting of the Parties shall be placed on the public part of the SIOFA website.
19. The SIOFA Secretariat shall provide logistical support and information to the Review Panel but shall not form part of the Panel.

Report of the Performance Review

20. The report of the Review Panel shall be a concise, well-structured and easy to read document that:
 - a. Describes the process and steps taken to conduct the review (e.g. documents examined, individuals and organisations consulted etc.);
 - b. Presents the outcomes of the review;
 - c. Provides recommendations from the Review Panel on improvements to SIOFA's performance with respect to the review criteria; and
 - d. Prioritises the recommendations from the perspective of the Panel.

Process for consideration and implementation of Performance Review recommendations

21. The performance review report including recommendations shall be considered firstly by the Scientific Committee and the Compliance Committee and then by the Meeting of the Parties for discussion and action, if needed.
22. The Scientific Committee and the Compliance Committee shall report to the Meeting of the Parties the results of their discussions including plans for addressing any of the recommendations made by the Review Panel and tracking process in that regard.
23. Taking into consideration the discussions by the Scientific Committee and the Compliance Committee, the 10th Meeting of the Parties shall consider the report and any recommendations and decide whether there are any urgent recommendations that require early implementation.
24. A standing item shall be placed on the agenda of future Meetings of the Parties to follow up on progress made against the implementation plan.

Funding

25. The costs of the performance review shall be borne preferably through voluntary contributions. In the event that there are outstanding costs, these shall be borne by the SIOFA budget. These costs may include:
 - a. Fees to Panel members for their work, if required;
 - b. Reimbursement of economy-class travel and subsistence costs, if requested, for to Panel members their participation in a Review Panel meeting and to the Panel Chairperson for their participation in the 10th Meeting of the Parties; and
 - c. Hire of any necessary meeting venue(s), equipment and other costs associated with the performance review.

Annex 1: Criteria for reviewing the performance of SIOFA

This annex provides a list of specific criteria that the review panel should address and if appropriate provide recommendations for their review.

Area	General criteria	Detailed criteria
<i>1. Conservation and management</i>	Status of fisheries resources	<ul style="list-style-type: none"> • Status of fisheries resources under the purview of SIOFA • Trends in the status of those resources • Status of species that belong to the same ecosystems as, or are associated with or dependent upon, targeted fisheries resources
	Ecosystem approach	<ul style="list-style-type: none"> • Extent to which SIOFA decisions take account of and incorporate an ecosystem approach to fisheries management
	Data collection and sharing	<ul style="list-style-type: none"> • Extent to which SIOFA has agreed formats, specifications and timeframes for data submissions
		<ul style="list-style-type: none"> • Extent to which SIOFA CCPs, individually or through SIOFA, collect and share complete and accurate data concerning fishery resources and other relevant data in a timely manner
		<ul style="list-style-type: none"> • Extent to which fishing and research data and fishing vessel and research vessel data are gathered by SIOFA and shared among CCPs
		<ul style="list-style-type: none"> • Extent to which SIOFA is addressing any gaps in the collection and sharing of data as required
	Quality and provision of scientific advice	<ul style="list-style-type: none"> • Extent to which SIOFA receives and acts on the basis of the best scientific advice relevant to the fisheries resources under its purview, as well as to the effects of harvesting, research, conservation and associated activities on the marine ecosystem • Extent to which the structure, processes, procedures and expertise of the Scientific Committee and the Secretariat meet the needs and resources of SIOFA and the data and technical requirements of the most recent modelling platforms
	Adoption of conservation and management measures	<ul style="list-style-type: none"> • Extent to which SIOFA has adopted Conservation and Management Measures (CMMs) for fisheries resources that ensure the long-term conservation and sustainable use of those resources and are based on the best scientific evidence available
		<ul style="list-style-type: none"> • Extent to which SIOFA has applied precautionary approach as set forth in Article 4(c) of the Convention and the Code of Conduct of Responsible

		<p>Fisheries Article 7.5, including the application of precautionary reference points</p> <ul style="list-style-type: none"> • Extent to which SIOFA has followed the criteria established under Article 6(2)-(4) of the Agreement, in the adoption of measures for the allocation of total allowable catch or total allowable fishing effort • Extent to which SIOFA has moved towards the adoption of CMMs for previously unregulated fisheries, including new and exploratory fisheries • Extent to which SIOFA applies uniform principles and procedures to all fisheries resources under its purview • Extent to which SIOFA has taken due account of the need to conserve marine biological diversity and minimise adverse impacts of harvesting, research, conservation and associated activities on fishery resources and its marine ecosystems • Extent to which SIOFA has adopted measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target fishery 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
	Capacity management	<ul style="list-style-type: none"> • Extent to which SIOFA has identified fishing capacity levels commensurate with the long-term conservation and sustainable use of fishery resources • Extent to which SIOFA has taken actions to prevent or eliminate excess fishing capacity and effort • Extent to which SIOFA monitors the levels of fishing effort
	Reporting Requirements	<ul style="list-style-type: none"> • Analysis of SIOFA's reporting requirements to improve efficiency, avoid redundancy and reduce unnecessary burden to CCPs
<i>2. Compliance and enforcement</i>	Flag State duties	<ul style="list-style-type: none"> • Extent to which SIOFA CCPs are fulfilling their duties as flag States under Article 11 of the Agreement, pursuant to CMMs adopted by SIOFA and under other international

		instruments, including, inter alia, the 1982 Law of the Sea Convention, the 1995 Agreement and the 1993 FAO Compliance Agreement, as applicable
	Port State measures	<ul style="list-style-type: none"> • Extent to which SIOFA has adopted measures relating to the exercise of the rights and duties of its CCPs as port States, including under Article 12 of the Agreement, the Code of Conduct for Responsible Fisheries and the FAO Port States Measures Agreement, as applicable • Extent to which these measures are effectively implemented
	Monitoring, control and surveillance	<ul style="list-style-type: none"> • Extent to which SIOFA has adopted integrated Monitoring, Control and Surveillance (MCS) measures (e.g. record of vessels, VMS, inspections in port and at sea, regulation of transshipment, market-related measures, fight against IUU fishing, etc.) • Extent to which these MCS measures are effectively implemented
	Follow-up on infringements	<ul style="list-style-type: none"> • Extent to which SIOFA and its CCPs follow up on non-compliance with CMMs
	Cooperative mechanisms to detect and deter non-compliance	<ul style="list-style-type: none"> • Extent to which SIOFA has established adequate cooperative mechanisms to monitor compliance, detect and deter non-compliance, and remedy compliance issues (e.g. compliance committees, IUU vessel lists, sharing of information about non-compliance) • Extent to which these mechanisms are being utilised effectively
	Market-related measures	<ul style="list-style-type: none"> • Extent to which SIOFA has adopted measures relating to the exercise of the rights and duties of CCPs as market States for SIOFA fishery resources
	Reporting Requirements	<ul style="list-style-type: none"> • Analysis of SIOFA's reporting requirements to improve efficiency, avoid redundancy and reduce unnecessary burden to CCPs.
<i>3. Decision-making and dispute settlement</i>	Decision-making	<ul style="list-style-type: none"> • Efficiency of Meetings of the Parties, meetings of its subsidiary bodies and working groups (including intersessional working groups) in addressing critical issues in a timely and effective manner • Extent to which SIOFA has transparent and consistent decision-

		<p>making procedures that facilitate the adoption of CMMs and decisions in a timely and effective manner</p> <ul style="list-style-type: none"> • Existence of an informal mechanism of cooperation between CCPs based on reciprocities
	Dispute settlement	<ul style="list-style-type: none"> • Extent to which SIOFA has established adequate mechanisms for resolving disputes
<i>4. International cooperation</i>	Transparency	<ul style="list-style-type: none"> • Extent to which SIOFA is operating in a transparent manner, taking into account Article 14 of the Agreement and the Code of Conduct for Responsible Fisheries
		<ul style="list-style-type: none"> • Extent to which SIOFA decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion
	Relationship with CNCPs	<ul style="list-style-type: none"> • Extent to which SIOFA facilitates cooperation between Contracting Parties and CNCPs including through encouraging CNCPs to become Contracting Parties or to implement voluntarily SIOFA CMMs
	Relationship with non-CCPs undermining the objectives of the Agreement	<ul style="list-style-type: none"> • Extent to which SIOFA provides for action in accordance with international law against non-CCPs undermining the objectives of the Agreement, as well as measures to deter such activities, as well as encouraging them to become Contracting Parties and CNCPs or to implement voluntarily SIOFA CMMs
	Cooperation with international organisations	<ul style="list-style-type: none"> • Extent to which SIOFA cooperates with other international organisations, including under Article 16 of the Agreement
	Special requirements of developing States	<ul style="list-style-type: none"> • Extent to which SIOFA recognises the special requirements of developing States, in particular the least development among and small island developing States, and pursues forms of cooperation with developing States, including under Article 13 of the Agreement and the Code of Conduct for Responsible Fisheries
<ul style="list-style-type: none"> • Extent to which SIOFA CCPs, individually or through the Meeting of the Parties, provide relevant assistance to developing States 		
<i>5. Financial and administrative issues</i>	Availability of resources for activities	<ul style="list-style-type: none"> • Extent to which financial and other resources are made available to

		achieve the aims of SIOFA and to implement SIOFA's decisions
	Efficiency and cost-effectiveness	<ul style="list-style-type: none">• Extent to which SIOFA is efficiently and effectively managing its human and financial resources, including those of the Secretariat• Extent to which the schedule and organisation of the meetings could be improved

Annex 2: Terms and associated definitions for reviewing the performance of SIOFA

This annex provides terms and associated definitions proposed as guidance for the Meeting of the Parties and subsidiary bodies' discussions to avoid ambiguity surrounding how particular paragraphs of the Panel's report should be interpreted.

Level 1: **RECOMMENDED, RECOMMENDATION** (formal); **REQUESTED, REQUEST** (informal): A conclusion for an action to be undertaken by the Meeting of the Parties, a subsidiary (advisory) body and/or the Secretariat. Note: Subsidiary (advisory) bodies must have their Recommendations and Requests formally provided to and accepted by the Meeting of the Parties. The intention is that the higher body will consider the action for endorsement under its own mandate, if the subsidiary body does not already have the required mandate. Ideally, this should be task-specific and contain a timeframe for completion.

Level 2: **AGREED**: Any point of discussion from a meeting, which the Meeting of the Parties or relevant subsidiary body considers to be an agreed course of action covered by its mandate, which has not already been dealt with under Level 1 above; a general point of agreement among delegations/participants of a meeting which does not need to be elevated in the Meeting of the Parties' reporting structure.

Level 3: **NOTED/NOTING; CONSIDERED; URGED; ACKNOWLEDGED**: General terms to be used for consistency. Any point of discussion from a meeting, which the Panel considers to be important enough to record in a meeting report for future reference. Any other term may be used to highlight the importance of the relevant paragraph to the reader of a SIOFA report. Other terms may be used but will be considered for explanatory/informational purposes only and shall have no higher rating within the reporting terminology hierarchy than Level 3.

Annex IV – Panel members short bios



Fuensanta Candela Castillo, Chairperson. Spain.

Fuensanta Candela is a retired EU official since 2014. Her career at the European Commission spanned over 26 years of active duty in various services, of which the last 12 as a policy officer and later Head of Unit in the Maritime Affairs and Fisheries Directorate-General. She holds a university degree in both law and biology, as well as ample experience in international fisheries fora as EU delegate, head of delegation or chairperson of negotiation processes. She served as an independent expert panellist in the Performance Review Processes of 2 Regional Fisheries Management Organisations: NAFO (2018) and GFCM (2019), in the latter case serving also as panel coordinator. Since 2020, she has been serving as a senior expert consultant with GFCM, with special focus in the area of compliance and enforcement.



Katherine Bernal Saavedra, Chile.

Katherine Bernal is an International Fisheries Lawyer with 12 years of experience in this field, mainly representing the Government of Chile. In 2020, she moved to Uruguay and after a short break returned to work remotely as a consultant for the Government of Chile and several other Organizations. Early in her career she worked as a local judge settling local disputes and after that she worked as the assistant lawyer of different Committees at the Senate of the Republic of Chile. After her initial path she became part of the International Affairs Unit of the Undersecretariat for Fisheries and Aquaculture of Chile and was proud to represent her country at the UN as many other international venues. In 2022 she was elected as the chairperson of the Compliance and Technical Committee of the South Pacific Regional Fisheries Management Organisation.



Joseph Chia-Chi Fu. Chinese Taipei.

Joseph Chia-Chi Fu has more than 20 years of experience in fisheries management and has been working closely with the government and the industry as a consultant, especially in terms of RFMO policies and relevant management issues. As the Director of the Operation Division of the Overseas Fisheries Development Council (OFDC), Joseph is responsible for providing consultancies and support on RFMOs and international fisheries matters, and leading a team that engages in RFMOs. He also trains observers and inspectors for the National Observer Programme as well as National High Seas Boarding and Inspection Programme. He had joined the internship program of WCPFC and furthered his understanding of WCPFC operation, particularly in the MCS operation and Data dissemination. Since 2017, he has been designated as the coordinator for WCPFC Chinese Taipei Trust Fund.



Hussain Sinan, Maldives.

Hussain Sinan is a Nippon Foundation's Ocean Nexus post-doctoral fellow at Dalhousie University. Sinan's research is focused on equitable governance in transboundary species, particularly tuna and tuna-like species in Regional Fisheries Management Organizations (RFMOs). It includes identifying legal, economic, political and institutional barriers to equitable tuna governance, political powerplay in RFMOs, and solutions for better participation of developing coastal States in the RFMO decision-making process. Sinan represented the Maldives in the Indian Ocean Tuna Commission prior to his research. Apart from IOTC, he has participated in various international forums such as FAO's Committee on Fisheries and the Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ). Sinan chaired the Southwest Indian Ocean Fisheries Commission (SWIOFC) and also chaired the 2021 performance review panel for the Commission for the Conservation of Southern Bluefin Tuna (CCSBT).